

The Economic Importance of New York's Property-Casualty Insurance Industry, 2014-18

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Goss & Associates

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Foreword

The Economic Importance of New York's Property-Casualty Insurance Industry, 2014-18

New York's property-casualty (P&C) industry is expanding, adding jobs and having a significant impact on the New York economy, although its economic impact has declined since our 2012 study. During the national U.S. recession, 2007 to 2009, the state P&C industry's impact expanded at a pace well

above other industries in the state, exceeding that of P&C firms in other states. However, as a result of Superstorm Sandy, New York's P&C industry experienced slower growth and reduced economic impacts from 2009 to 2014.

"This report highlights the significant impact of the property & casualty industry on the New York economy. Job growth for the industry is expected to continue at a higher rate than private jobs overall, resulting in significant positive impacts on state and local economies. Insurance industry job growth and higher wages make the property & casualty industry an important building block in New York's economic development."

– Assembly Majority Leader Joseph Morelle



Preface

The Economic Importance of New York's Property-Casualty Insurance Industry, 2014-18

The subsequent analysis¹ was prepared for NY First, Inc. by Ernest Goss, Ph.D., Principal Investigator, and Jeffrey Milewski, Senior Research Economist at Goss & Associates. Findings remain the sole property of NY First and may not be used without prior approval of this organization. Any errors or misstatements contained in this study are solely the responsibility of the authors. The authors' biographies are provided in Appendix C. Please address all correspondence to:

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¹Goss, Ernest. The Contribution of the Property-Casualty Insurance Industry to the New York Economy: 2012 and Beyond, 2012. <http://www.newyorkfirst.org/file/c7bd51b043ffbc2a7b3e-48885faced27>

²This study was completed independent of Creighton University. As such, Creighton University bears no responsibility for findings or statements by Ernest Goss and Jeffrey Milewski, or Goss & Associates, Economic Solutions.

Goals of the study

The goals of this study are to estimate the impact New York's property-casualty industry on the economy, and to update a previous study³ completed by Goss & Associates.

Specific goals of the study are to:

1. Estimate the economic impact of New York's property-casualty industry for the period 2014 to 2018 inclusive for:
 - the state of New York
 - each New York county
 - each New York assembly district
 - each New York senate district
 - each New York economic development district
2. Quantify some of the social impacts of the property-casualty industry on the state of New York.
3. Quantify the economic impact of the New York property-casualty insurance industry on other New York industries.
4. Quantify the spillover effects of the New York property-casualty insurance industry on new business venture formation, enterprise growth, employment, and city and state tax collections.

The Goss & Associates research team thanks the Board of Directors and staff of NY First. However, any errors, omissions, or misstatements are solely the responsibility of Goss & Associates and the principal investigator.

This study, while funded by NY First, was developed independently of this organization.

³Goss, Ernest. The Contribution of the Property-Casualty Insurance Industry to the New York Economy: 2012 and Beyond, 2012. <http://www.newyorkfirst.org/file/c7bd51b043ffbc2a7b3e-48885faced27>

Glossary

Term	Definition
Agencies, brokerages, and other insurance	This industry group comprises establishments primarily engaged in (1) acting as agents (i.e., brokers) in selling annuities and insurance policies or (2) providing other employee benefits and insurance related services, such as claims adjustment and third party administration.
Discounted	Unless stated otherwise, all financial data in this report are stated in 2015 dollars.
Direct impacts	The set of expenditures applied to the predictive model for impact analysis. For example, direct impacts include property-casualty wages paid to its employees.
Direct insurance	This industry comprises establishments primarily engaged in initially underwriting (i.e., assuming the risk and assigning premiums) various types of insurance policies (except life, disability income, accidental death and dismemberment, and health and medical insurance policies).
Direct life insurance carriers	This U.S. industry comprises establishments primarily engaged in initially underwriting (i.e., assuming the risk and assigning premiums) annuities and life insurance policies, disability income insurance policies, and accidental death and dismemberment insurance policies.
Direct P&C carriers	This U.S. industry comprises establishments primarily engaged in initially underwriting (i.e., assuming the risk and assigning premiums) insurance policies that protect policyholders against losses that may occur as a result of property damage or liability.
IMPLAN	Using classic input-output analysis in combination with regional specific Social Accounting Matrices and Multiplier Models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains county, state, zip code, and federal economic statistics which are specialized by region. See Appendix C.
Input-output analysis	A type of applied economic analysis that tracks the interdependence among various producing and consuming sectors of an economy. It measures the relationship between a given set of demands for final goods and services and the inputs required to satisfy those demands. (U.S. Bureau of Economic Analysis)
Insurance carriers	This industry group comprises establishments primarily engaged in underwriting (assuming the risk, assigning premiums, etc.) annuities and insurance policies and investing premiums to build up a portfolio of financial assets to be used against future claims. Industry code (NAICS=524)
Insurance firms	This is all encompassing and includes all firms in insurance as defined by the U.S. Census Bureau: insurance carriers; agencies, brokerages, and other insurance related activities. Industry code (NAICS=524)
Insurance industry	Includes all areas of insurance as defined by the U.S. Census Bureau: insurance carriers; Agencies, brokerages, and other insurance related activities; Insurance agencies and brokerages.
Jobs supported	A job in IMPLAN = the annual average of monthly jobs in that industry. Thus, 1 job lasting 12 months = 2 jobs lasting 6 months each or = 3 jobs lasting 4 months each.
Labor income	Wages & salaries plus self-employment income.
Overall sales impacts, or total impacts	Amount of additional sales, including insurance premiums, retail sales, wholesale expenditures, construction sales, etc. It is analogous to gross domestic product (GDP) but will include some double counting and will thus exceed GDP.
P&C Industry	Property-Casualty industry includes carriers as well as agents and brokerages; includes captive, direct response and independent agent system companies.
Payroll	Payroll includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation allowances, sick-leave pay, and employee contributions to qualified pension plans paid during the year to all employees.
Private workers	All those working excluding government workers, state, local and federal.
Productivity growth	Growth in Gross Domestic Product (GDP) per worker, also premiums per worker.
Self-employment income	Income of proprietors of non-incorporated companies including attorneys, accountants and consultants.
Wages and salaries	Wages and salaries represent the total payroll cost of the employee paid by the employer. This includes, wage and salary, all benefits (e.g., health, retirement, etc.) and employer paid payroll taxes (e.g. employer side of social security, unemployment taxes, etc).
Spillover impact	Impacts in businesses and industries tied indirectly to insurance industry spending. For example, wholesale firms that sell to insurance agency or brokerage firm vendors experience spillover impacts.
Wages and salaries	Total payroll cost of the employee paid by the employer. This includes wage and salary, all benefits (e.g. health, retirement, etc) and employer paid payroll taxes (e.g. employer side of social security, unemployment taxes, etc).

Executive Summary

The Economic Importance of New York's Property-Casualty Insurance Industry, 2014-18

I. P&C Industry Performance during U.S. Recession and Recovery

New York's insurance industry growth surpasses that of the average U.S. state, with wages exceeding those of other industries. Job growth for the industry is expected to continue at a higher rate than private jobs overall, and productivity growth has resulted in price decreases for households and businesses.

- **Job performance data for 2007-09 vs. 2009-13 show that:**
 - o During the recession, 2007-09, New York's P&C firms significantly outperformed the U.S. private economy, the New York private economy, and U.S. P&C firms.
 - o However during the nation's economic recovery, 2009-13, New York's P&C firms lost jobs as the New York and U.S. private sectors gained jobs. Furthermore, both New York and U.S. P&C firms shed jobs, but New York P&C firms lost jobs at a faster pace than U.S. P&C firms.
 - o Over the full period, 2007-13, New York's share of P&C jobs increased from 6.3 percent in 2007 to 6.4 percent in 2013.

During the U.S. recession, 2007-09, New York's P&C industry *outperformed* the private economy, the overall insurance industry, and the U.S. P&C industry in terms of job growth and the growth in average salaries per job.

During the U.S. economic recovery, 2009-13, New York's P&C industry *underperformed* the private economy, the overall insurance industry, and the U.S. P&C industry in terms of job growth and the growth in average salaries per job.

Over the full period, 2007-13, New York's share of P&C jobs increased from 6.3 percent in 2007 to 6.4 percent in 2013.

Executive Summary

- **Wages and salaries per job data show that:**
 - During the recession, New York's P&C firms significantly out-performed the U.S. private economy, the New York private economy, the New York insurance industry, and U.S. P&C firms.
 - However during the nation's economic recovery (2009-13), New York's P&C firms average wage and salaries declined while growth was recorded among New York private employers, U.S. private employers, New York insurance firms, U.S. insurance companies, and U.S. P&C firms.
- **As a result of comparative job and wages and salaries growth:**
 - New York P&C companies' relative wages and salaries per job advantage increased during the recession, 2007-09, but declined during the economic recovery, 2009-13.
 - Even so, in 2013, New York P&C average wages and salaries per job were 116.7 percent of U.S. P&C average wages and salaries per job.
- **Insurance jobs contribute to "brain gain" and higher salaries:**
 - Approximately 80.3 percent of insurance jobs added through the year 2020 will require a bachelor's degree, or higher, while only 2.8 percent will be available to high school dropouts.
 - In 1998, New York insurance industry payrolls accounted for 2.80 percent of total New York non-farm payrolls and expanded to 2.94 percent by 2013.⁴
 - U.S. insurance payrolls as a percent of non-farm payrolls advanced from 2.44 percent in 1998 to 2.62 percent in 2013.
 - New York P&C firms supported average wages per job of \$81,916 in 2014, significantly higher than the New York average of \$63,794.

Approximately 80.3 percent of insurance jobs added through the year 2020 will require a bachelor's degree, or higher, while only 2.8 percent will be available to high school dropouts.

New York P&C industry's sub-par economic performance during the U.S. economic recovery can be linked to the almost \$10 billion in Superstorm Sandy damages.

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⁴U.S. Bureau of Economic Analysis.

Executive Summary

II. State Competition for Insurance Jobs

- Ohio, ranking 7th in the nation for the number of insurance jobs, repealed its corporation franchise tax in 2014, a business privilege tax established in 1902.
- In 2013, Florida Senate bill 7132, which threatened to revoke a years-long tax credit provided to insurance companies, died in chamber.⁵
- In Missouri, Gov. Jay Nixon signed House Bill 577 in July 2009, simplifying the process of moving insurance operations to Missouri, and in May 2013 signed Senate Bill 287, smoothing way for the formation of sponsored captive insurance companies and lowering the minimum capital and surplus requirements for captive insurance companies.
- An incentive program, a depopulation program, and efforts in active recruiting, proved to be effective in attracting new business to Louisiana. Seventeen percent of the property market has been redistributed from the three largest homeowner companies to smaller, regional companies that have moved to the state. Market share for *Louisiana Citizens Property Insurance Corporation*, the state-sponsored market of last resort, has declined.
- Building code changes are reducing insurance costs:
 - o Following a devastating tornado in 2003, the city of Moore, Oklahoma adopted building codes that specifically address the threat of tornadoes.
 - o In 2014, Mississippi implemented a state-wide building code, which will help reduce the damage from major weather events, reducing insurance costs.
 - o New York does not have a mandatory state-wide building code, and has not adopted the latest recommended residential codes.

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New York does not have a mandatory statewide building code, and has not adopted the latest recommended residential codes.

⁵<https://legiscan.com/FL/bill/S7132/2013>

Executive Summary

III. P&C's Impact on New York's Municipal Bond Market

- Data for 2012 show that the P&C industry invested 35.4 percent of its fixed income investment in state and local municipal bonds. In 2013, that percent dipped to 34.2.
- P&C companies are consistently one of the largest purchasers of municipal bonds in the country, having been the fourth largest in 2013 and fifth largest in 2012. In 2013, only households, mutual funds, and commercial banks exceeded P&C companies' purchases of municipal bonds.⁶
- By increasing the demand for municipal bonds, P&C bond purchases support higher prices and lower interest rates on municipal bonds, producing significant savings for the New York taxpayer.
- P&C municipal bond purchases in New York over the past eight years lowered interest rates on bond issuances by an average of 0.47 percent, or 47 basis points.
- Between 2006 and 2013, P&C purchases of municipal bonds saved New York taxpayers an average of \$152.3 million annually, for a total savings of \$1.2 billion.

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IV. Economic Impacts of New York's P&C Industry

- Between 2014 and 2018, New York's P&C firms will continue to have significant positive impacts on the state economy, beyond interest saved on municipal bonds. Discounted to present value, the state's P&C firms:⁷
 - Generated \$38.0 billion in overall impacts for 2014.
 - Will produce \$153.9 billion in overall impacts between 2015 and 2018.
 - Supplied \$12.4 billion in wages and salaries for 2014.
 - Will provide \$51.4 billion in wages and salaries between 2015 and 2018.
 - Provided \$1.4 billion in self-employment income for 2014.
 - Will produce \$6.1 billion in self-employment income between 2015 and 2018.

Between 2006 and 2013, P&C purchases of municipal bonds saved New York taxpayers an average of \$152.3 million annually, for a total savings of \$1.2 billion.

⁶It should also be noted that P&C employee purchases of municipal bonds are included in both households and mutual funds.

⁷Through this study, unless indicated otherwise, all future financial values are discounted to present, or 2015 value.

Executive Summary

- Between 2014 and 2018, New York's P&C companies will continue to have significant positive impacts on the New York job market. P&C firms:
 - o Supported 151,685 jobs, both insurance and non-insurance, for 2014.
 - o Will generate an average of 158,737 jobs per year between 2015 and 2018.
- Between 2014 and 2018, New York P&C firms will continue to have significant positive impacts on state and local tax collections. Discounted to present value, P&C companies:
 - o Produced \$2.3 billion in state and local taxes in 2014.
 - o Will produce \$5.4 billion in state and local taxes between 2015 and 2018
- Other estimated impacts:
 - o Every 1,000 New York P&C jobs support another 1,639 jobs in non-P&C firms in the state.
 - o Each New York P&C job creates almost \$40,600 in state and local taxes each year.
 - o The average pay supported by New York's P&C industry, both direct and indirect, is approximately 28.4 percent higher than the average for all New York private jobs.
 - o For 2014, the P&C industry is estimated to have contributed approximately \$38.0 billion to the New York economy with independent P&C firms accounting for \$21.6 billion of the total, or 56.8 percent.
 - o For 2014, the P&C industry is estimated to have supported approximately 151,685 New York jobs with independent P&C firms accounting for 86,309 of the total.

For 2014, the P&C industry is estimated to have contributed approximately \$38.0 billion to the New York economy with independent P&C firms accounting for \$21.6 billion of the total, or 56.8 percent.

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Every 1,000 New York P&C jobs support another 1,639 jobs in non-P&C firms in the state.

Executive Summary

IV. Impacts by Political Divisions

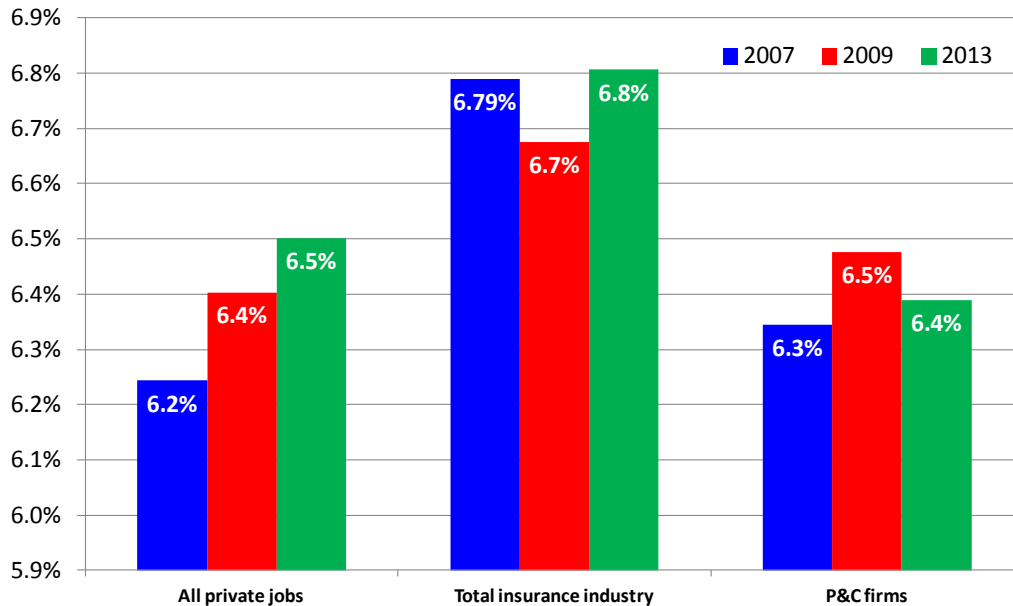
- **Overall, or revenue impacts for 2014:**
 - o Counties: The top five counties were: New York at \$11.6 billion, Nassau at \$7.1 billion, Erie at \$4.3 billion, Suffolk at \$2.2 billion and Albany at \$1.7 billion.
 - o Assembly Districts: The top five districts were: District 112 (Assembly Member Tedisco) at \$898.1 million, District 141 (Assembly Member Peoples-Stokes) at \$690.0 million, District 142 (Assembly Member Kearns) at \$690.0 million, District 143 (Assembly Member Wozniak) at \$690.0 million, and District 149 (Assembly Member Ryan) at \$690.0 million.
 - o Senate Districts: The top five districts were: District 26 (Senator Squadron) at \$2.1 billion, District 29 (Senator Serrano) at \$2.0 billion, District 27 (Senator Hoylman) at \$1.9 billion, District 28 (Senator Krueger) at \$1.9 billion, District 30 (Senator Perkins) at \$1.9 billion, and District 31 (Senator Espaillat) at \$1.9 billion.
 - o Economic Development Regions: The top five districts were: New York City at \$13.5 billion, Long Island at \$9.3 billion, Western New York at \$4.5 billion, Capital Region at \$3.7 billion and Central New York at \$1.8 billion.
- **Job impacts for 2014:**
 - o Counties: The top five counties were: New York at 34,931, Nassau at 30,213, Erie at 19,915, Suffolk at 10,590, and Onondaga at 7,090.
 - o Assembly Districts: The top five districts were: District 112 (Assembly Member Tedisco) at 3,940, District 141 (Assembly Member Peoples-Stokes) at 3,096, District 142 (Assembly Member Kearns) at 3,096, District 143 (Assembly Member Wozniak) at 3,096, District 149 (Assembly Member Ryan) at 3,096.
 - o Senate Districts: The top five districts were: District 5 (Senator Marcellino) at 7,808, District 8 (Senator Venditto) at 7,808, District 26 (Senator Squadron) at 6,333, District 6 (Senator Hannon) at 6,043 and District 7 (Senator Martins) at 6,043.
 - o Economic Development Regions: The top five regions were: New York City at 44,245, Long Island at 40,804, Western New York at 20,111, Capital Region at 15,502, and Mid-Hudson at 7,940.



Executive Summary

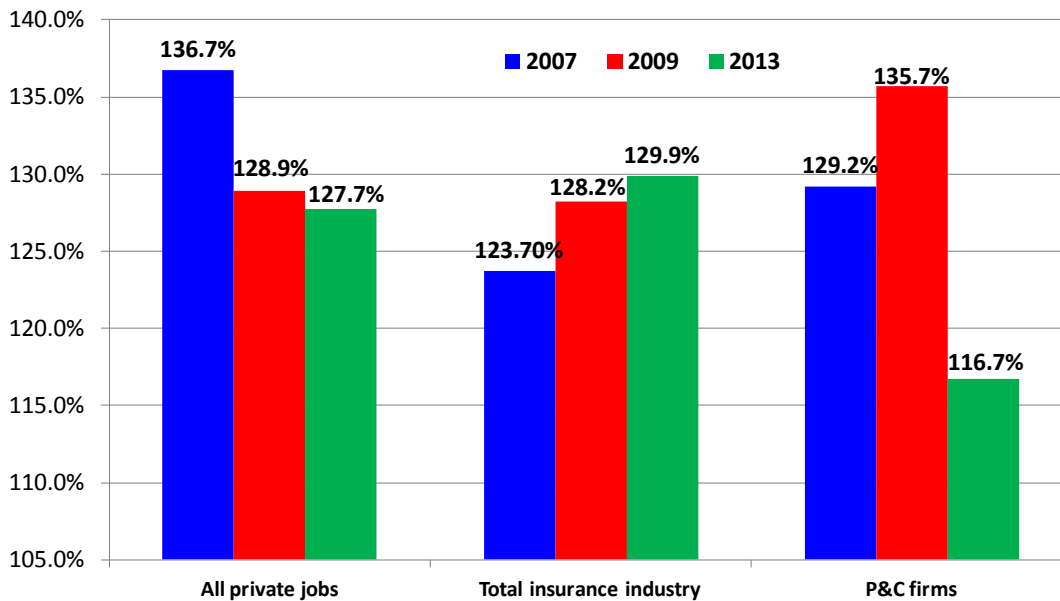
Figures EX.1 – EX.6 summarize data and impacts by year of New York's P&C industry

Figure EX.1: New York's share of U.S. jobs by industry, 2007, 2009, and 2013



Source: Goss & Associates based on U.S. Census data

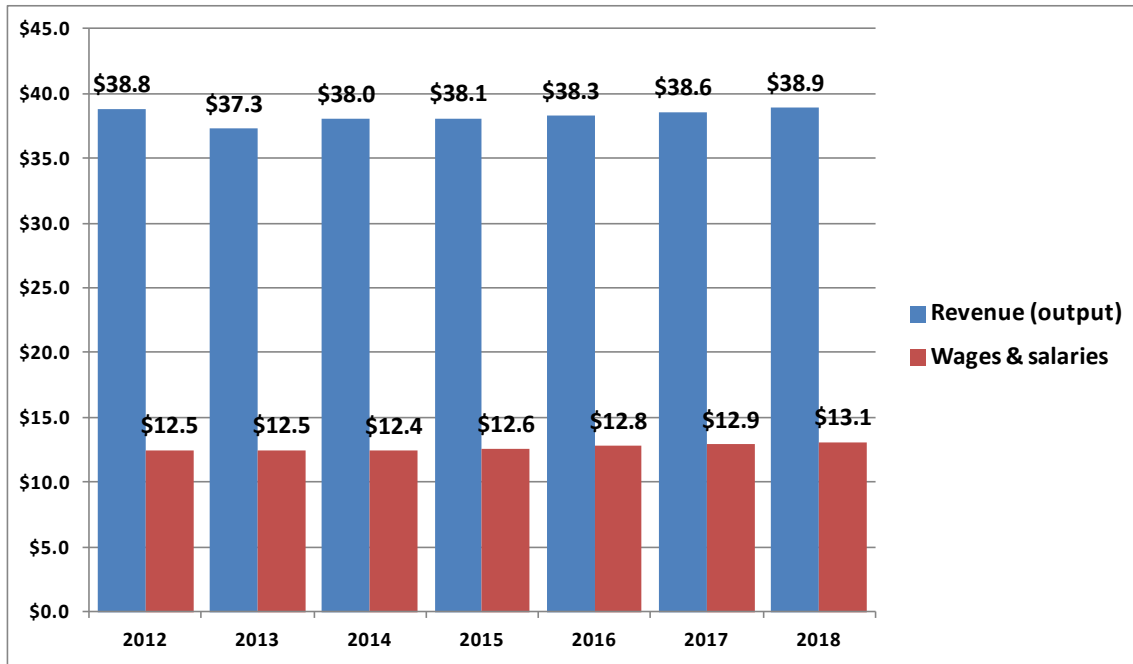
Figure EX.2: Ratio of New York wages & salaries per job, 2007, 2009 and 2013



Source: Goss & Associates

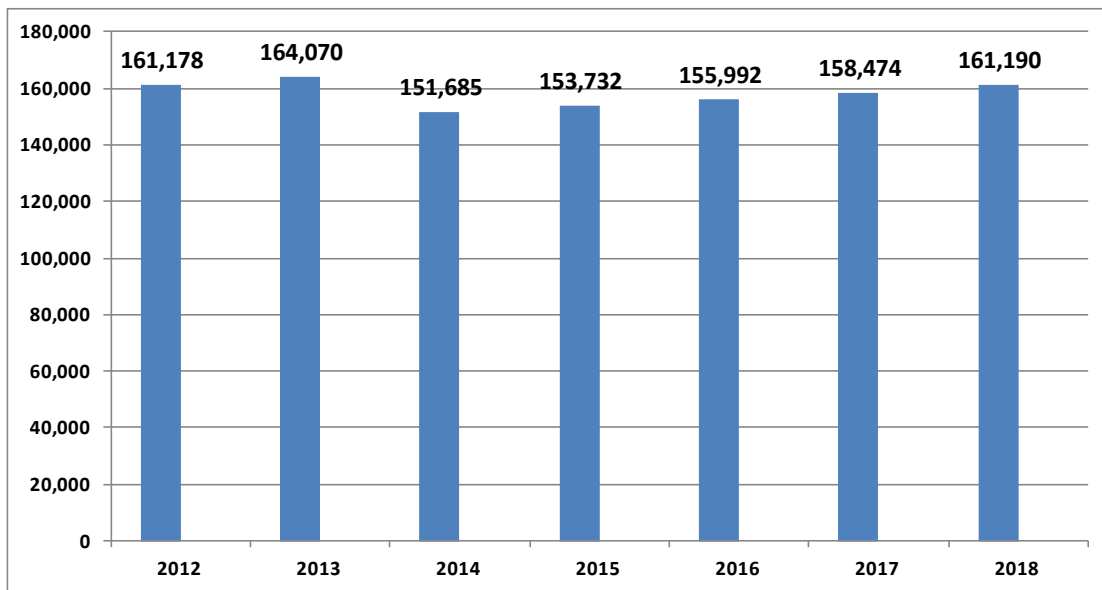
Executive Summary

Figure EX.3: Impact of P&C industry on New York, 2012-18 (billions of 2015 dollars)



Source: Goss & Associates

Figure EX.4: New York Jobs supported by P&C industry, 2012-18



Source: Goss & Associates

Executive Summary

Figure EX.5: Impact of P&C industry on New York state & local taxes, 2012-18 (millions of 2015 dollars)

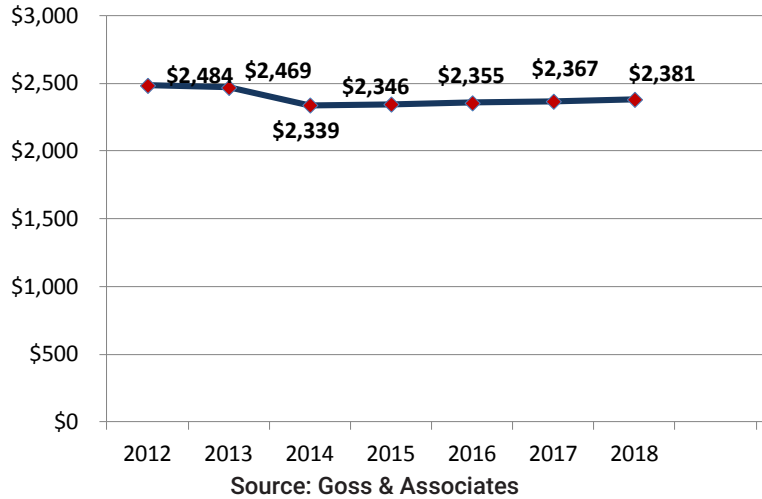
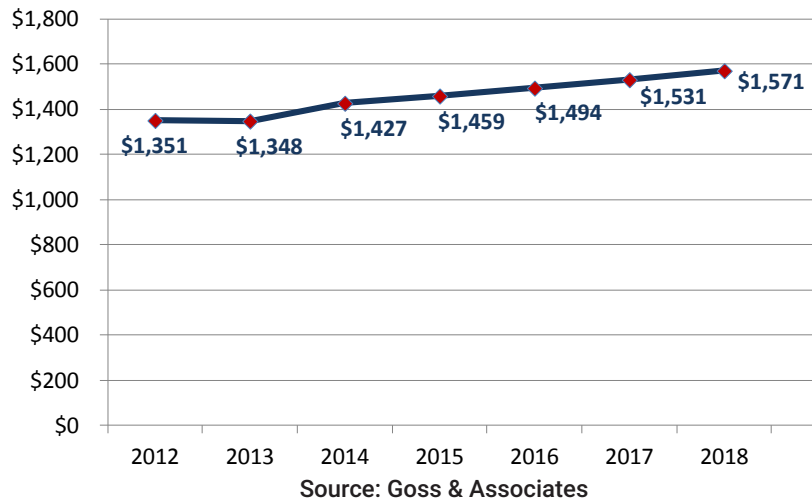


Figure EX.6: Impact of P&C industry on New York self-employment income, 2012-18 (millions of 2015 dollars)



Section 1 - New York's Insurance Industry: An Economic Building Block

Chapter Highlights⁸

• Job performance data show that:

- o During the U.S. recession, 2007-09, New York P&C firms significantly out-performed the U.S. private economy, the New York private economy and the U.S. P&C industry.
- o During the nation's economic recovery, 2009-13, New York's P&C firms lost jobs as New York and U.S. private sectors gained jobs. Furthermore, New York P&C firms lost jobs at a faster pace than U.S. P&C firms.
- o However, over the full period, 2007-13, New York's share of P&C jobs increased from 6.3 percent in 2007 to 6.4 percent in 2013.

• Wages and salaries per job data show that:

- o During the recession, New York's P&C industry significantly out-performed the U.S. private economy, the New York private economy, the New York insurance industry and U.S. P&C firms.
- o However, during the nation's economic recovery 2009-13, New York P&C firms' average wage and salaries per job declined, while growth was recorded among New York private employers, U.S. private employers, New York insurance firms, U.S. insurance companies, and U.S. P&C firms.



- As a result of comparative job and wages/salaries growth:
 - o New York P&C companies' relative wages and salaries per job advantage increased during the recession, 2007-09, but declined during the economic recovery, 2009-13.
 - o Even so, in 2013, New York P&C average wages and salaries per job were 116.7 percent of U.S. P&C average wages and salaries per job.
- Over the next decade, job growth among insurance agencies and brokerage firms is expected to exceed that of all private jobs by two percentage points.
- Productivity growth within the insurance industry has continued to help lower insurance costs for U.S. households, reducing spending nearly 12 percent over the last 10 years.

Productivity growth within the insurance industry has continued to help lower insurance costs for U.S. households, reducing spending nearly 12 percent over the last 10 years.

⁸Data for 2014 will not be released until May, 2016.

Insurance Jobs: An Economic Prize

Private job performance.⁹ Table 1.1 compares New York and U.S. employment growth for the recessionary period, 2007-09, and the economic recovery period 2009-13.¹⁰ Data show that the New York private economy out-performed the U.S. economy during the recession, and the recovery in terms of job growth. In terms of the insurance industry, New York lost jobs during the recession while the U.S. economy added jobs. However during the economic recovery, New York's insurance industry added jobs, while the U.S. insurance industry lost jobs.

Data in Table 1.1 show that during the recession, P&C firms significantly out-performed the U.S. private economy, the New York private economy and U.S. P&C firms. However during the nation's economic recovery, 2009-13, New York's P&C firms lost jobs as the New York and U.S. private sectors gained jobs. Furthermore both New York and U.S. P&C firms shed jobs, but New York P&C firms lost jobs at a faster pace than U.S. P&C firms.

As a result of these changes, New York's share of U.S. private jobs and insurance jobs rose between 2007 and 2013. Additionally, over the full period, New York's share of P&C jobs increased from 6.3 percent in 2007 to 6.4 percent. Figure 1.1 shows New York's share of U.S. jobs by area.

Private payroll per job. Table 1.2 compares New York and U.S. employment growth for the

recessionary period, 2007-09, and the economic recovery period 2009-13. Contrary to job success, data show that the New York private economy under-performed the U.S. economy during the recession, and the recovery, in terms of payroll growth per job. In terms of the insurance industry, New York gained relative payroll per job during the recession and the recovery.

During the recession average payroll data in Table 1.2 show that P&C firms significantly out-performed the U.S. private economy, the New York private economy, the New York insurance industry, and U.S. P&C firms.

However during the nation's economic recovery, 2009-13, New York's P&C firms' average payroll declined while growth was recorded among New York private employers, U.S. private employers, New York insurance firms and U.S. insurance companies. Furthermore, New York's P&C payroll per job declined at a faster rate than the U.S. overall.

According to the Insurance Information Institute, Superstorm Sandy inflicted \$18.75 billion in insured property losses on 16 states, excluding flood insurance claims covered by the federal flood insurance program. New York and New Jersey suffered the largest private insurance losses from Sandy.¹¹ The New York P&C losses from Superstorm Sandy help explain the state's weaker jobs and earnings numbers for 2009-13.

Table 1.1: Private employment growth, New York vs. U.S., 2007-09 and 2009-13

NAICS Code	Industry	NY	U.S.	NY	U.S.
		2007-09	2007-09	2009-13	2009-13
	All private jobs	-2.6%	-5.1%	4.9%	3.3%
524	Total insurance industry	-0.3%	1.4%	0.2%	-1.7%
5241	Insurance carriers	2.4%	4.3%	1.5%	-2.8%
524126	Property and casualty insurance carriers	6.8%	4.7%	-8.7%	-7.4%
5242	Agencies, brokerages, and insurance related activities	-4.8%	-3.2%	-1.9%	0.1%

Source: Goss & Associates calculations based on U.S. Census County Business Patterns

⁹Private jobs and private wages and salaries exclude federal, state and local government data.

¹⁰Data for 2014 will not be released by the U.S. Census Bureau until May 2016.

¹¹<http://www.iii.org/fact-statistic/hurricanes>

Figure 1.1: New York's share of U.S. jobs by private industry, 2007, 2009, and 2013

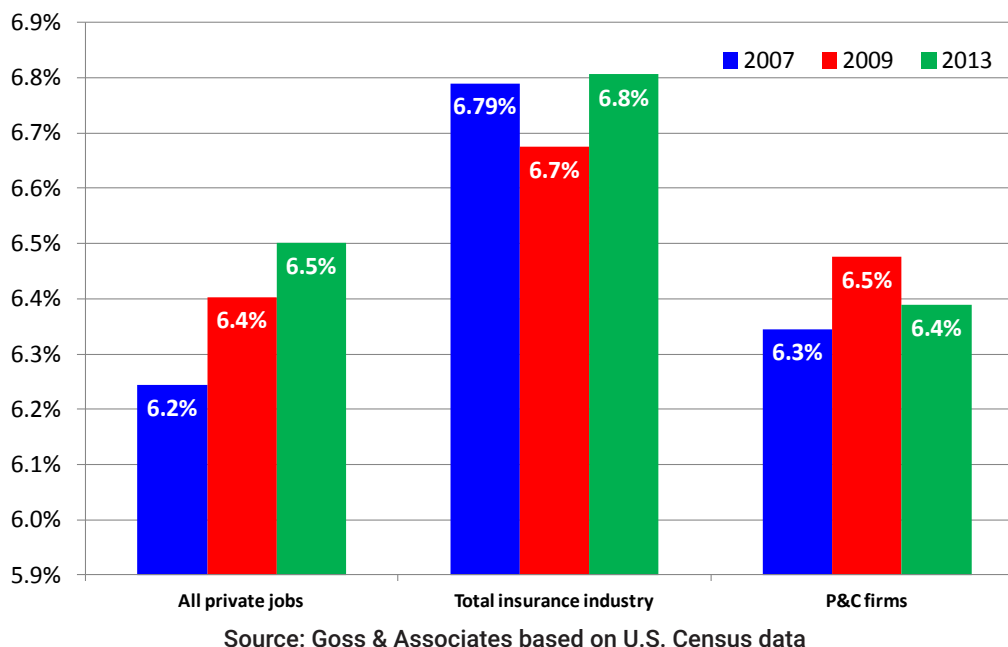


Table 1.2: Private payroll per job growth, New York vs. U.S., 2007-09 and 2009-13

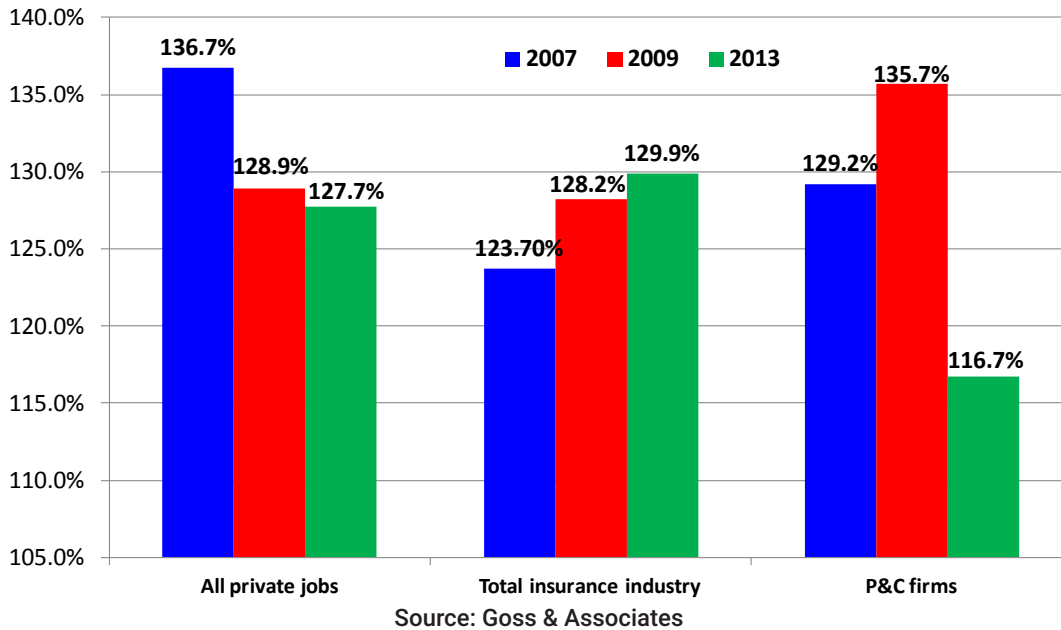
NAICS Code	Industry	NY	U.S.	NY	U.S.
		2007-09	2007-09	2009-13	2009-13
	All private jobs	-4.1%	1.7%	11.1%	12.1%
524	Total insurance industry	4.7%	1.1%	16.0%	14.5%
5241	Insurance carriers	3.9%	0.8%	18.7%	17.6%
524126	Property and casualty insurance carriers	11.9%	6.5%	-2.9%	12.9%
5242	Agencies, brokerages, and insurance related activities	5.2%	0.4%	9.0%	8.6%

Source: Goss & Associates calculations based on U.S. Census County Business Patterns

Figure 1.2 shows the ratio of New York to U.S. payroll per job. As a result of growth rates presented in Table 1.2, New York's payroll as a percent of U.S.'s declined for each period for private employers, but increased for insurance firms.

On the other hand, New York P&C companies' relative payroll per job advantage increased during the recession, 2007-09, but declined during the economic recovery, 2009-13. Even so, in 2013, New York P&C average payroll per job was 116.7 percent of U.S. P&C average payroll per job.

Figure 1.2: Ratio of New York to U.S. payroll per job, 2007, 2009 and 2013



Insurance Industry Employment Projections

Table 1.3 highlights job growth prospects for the insurance industry relative to all industries in the U.S. Projections spanning 2012 to 2022 indicate that the overall insurance industry is expected to add jobs more slowly than all industries combined, at a pace of approximately two thirds of the overall economy.

Within this total insurance category however, insurance agency and brokerage firms are expected to grow at a rate of 15.1 percent, exceeding that of jobs across all industries by more than four percentage points.

Within the insurance category, insurance agency and brokerage firms are expected to grow at a rate of 15.1 percent, exceeding that of jobs across all industries by more than four percentage points.

Table 1.3: Job growth for insurance vs. all industries, 2012-22

Industry	2012	2022	Job gains	2012-22 Growth
Direct insurance carriers (includes P&C but excludes life; health & medical)	591,300	578,800	-12,500	-2.1%
Insurance agencies & brokerages	658,400	757,600	99,200	15.1%
Total insurance	1,249,700	1,336,400	86,700	6.9%
All U.S. industries	145,355,00	160,983,700	15,628,000	10.8%

U.S. Bureau of Labor Statistics

<http://data.bls.gov/projections/nationalMatrix?queryParams=524210&ioType=i>

<http://data.bls.gov/projections/nationalMatrix?queryParams=524120&ioType=i>

Table 1.4 shows the expected level of jobs for 2020 along with the educational requirements. Data show that the financial services industry, which includes insurance, will provide approximately 30,390,000 positions. Importantly, data show that 80.3 percent of these jobs will require a bachelor's degree, with only 2.8 percent of these jobs open to high school dropouts. Increasingly, as presented in Table 1.4, manufacturing and old-line service industry jobs are being replaced by new service industries, including health services and financial services including insurance.

Table 1.4: Education requirements and job growth by industry to 2020

	Employment		Growth	Percent	
	2010	2020	2010-20	High school dropouts	Bachelor's degree & above
Wholesale & retail trade	19,450,000	21,510,000	10.6%	10.6%	90.4%
Professional & business services	9,690,000	12,130,000	25.2%	10.0%	79.9%
Govt. & public education	18,120,000	20,180,000	11.4%	1.7%	89.7%
Health Services	15,670,000	19,810,000	26.4%	4.4%	79.1%
Leisure & hospitality	12,930,000	15,320,000	18.5%	19.7%	84.3%
Manufacturing	10,070,000	10,490,000	4.2%	14.1%	96.1%
Financial services (includes insurance)	24,400,000	30,390,000	24.5%	2.8%	80.3%
Construction	7,370,000	8,290,000	12.5%	25.9%	88.9%
Transportation & public utilities	5,520,000	6,250,000	13.2%	9.2%	88.3%
Personal services	7,420,000	8,680,000	17.0%	15.2%	85.5%
Information services	2,650,000	2,890,000	9.1%	1.6%	91.3%
Private educational services	3,450,000	4,400,000	27.5%	4.4%	78.2%
Natural resources	3,860,000	4,260,000	10.4%	29.6%	90.6%

Source: Recovery: Job Growth And Education Requirements Through 2020, Georgetown University Center on Education and the Workforce, June 2013.



Initiatives to Attract Insurance Jobs

Given the nature of the industry, with high paying jobs and significant levels of investment, insurance industry investment and jobs remain economic “prizes” that must be competed for just as communities and states battle for other types of capital and jobs.

States continue to take an active approach to growing their insurance industry, competing for insurance jobs as they do for manufacturing jobs. Legislation and incentives are resulting in policies that help attract insurance companies to their communities.

In February of 2014, Louisiana's Insurance Commissioner reported success in recruiting insurance companies to the state's market through incentives and active recruiting.

Collaborative efforts continue to advance issues and concerns of mutual interest that impact the business climate for the insurance industry.

Since the establishment of Insurance and Financial Services Cluster (IFS) in Connecticut in 2003, growing collaboration and support from civic, educational, and government institutions is supporting education, business attraction and retention, training and recruitment, as well as public awareness and advocacy. This formal structure for the industry enables cooperation among educators, businesses, and government entities and is intended to stimulate industry growth.¹²

In February of 2014, Louisiana's Insurance Commissioner reported success in recruiting insurance companies to the state's market through incentives and active recruiting – programs created in response to the effects of Hurricane Katrina on the Louisiana P&C industry.¹³

¹²<http://www.connecticutifs.com/about-ct-ifs.aspx>, retrieved on April 11, 2015

¹³<http://www.lidi.louisiana.gov/docs/default-source/documents/publicaffairs/commissionerscolumn/february-2014.pdf?sfvrsn=4>

Just over a year later, as the state nears the tenth anniversary of the Hurricane Katrina devastation, the Louisiana Commissioner indicated that an incentive program and efforts in active recruiting have proven to be effective in attracting new insurance businesses to Louisiana. Seventeen percent of the property market has been redistributed from the three largest homeowner companies to smaller, regional companies that have moved to the state. In addition, market share for *Louisiana Citizens Property Insurance Corporation*, the state-sponsored market of last resort, has declined. These changes have resulted in providing a wider array of consumer choice.¹⁴

State initiatives provide incentives mainly through tax relief and by making the state's business environment more attractive to investors and potential businesses that may locate to the state. For example, Ohio, ranking 7th in the nation for the number of insurance jobs, repealed its corporation franchise tax, a business privilege tax established in 1902, as of the 2014 tax year.¹⁵ A 2014 study reported that the state will need 26,000 industry professionals by 2020.

In 2013, recognizing current and impending shortages, the state launched Insuring Ohio Futures, a statewide outreach and awareness program.¹⁶ Connected to this effort is the Ohio Military Veterans Initiative, and use of the Ohio Means Jobs Military Skills Translator to help veterans match their unique skills and experience to careers in the insurance industry.

...Ohio, ranking 7th in the nation for the number of insurance jobs, repealed its corporation franchise tax, a business privilege tax established in 1902, as of the 2014 tax year.

¹⁴<http://www.lidi.louisiana.gov/docs/default-source/documents/publicaffairs/commissionerscolumn/february-2015.pdf?sfvrsn=0>, retrieved on April 22, 2015

¹⁵http://www.tax.ohio.gov/corporation_franchise.aspx

¹⁶<http://insuringohiofutures.com/>, retrieved on April 11, 2015

In 2009, Missouri Governor Jay Nixon signed House Bill 577, streamlining the process of moving insurance operations to the state. The bill made it easier for companies to bring their operations to Missouri by removing certain financial and investment restrictions and expanding organizational options.¹⁷

In May 2013, Governor Nixon signed Senate Bill 287, smoothing the way for the formation of sponsored captive insurance companies as well as lowering the minimum capital and surplus requirements for captive insurance companies.¹⁸

In 2013, Florida Senate Bill 7132 which threatened to revoke a years-long tax credit, provided to insurance companies, died in chamber.¹⁹

In May 2013, Gov. Nixon signed Senate Bill 287, smoothing the way for the formation of sponsored captive insurance companies as well as lowering the minimum capital and surplus requirements for captive insurance companies.

In both Missouri and Ohio, preliminary data indicate that incentives are having positive impacts. Before the incentive legislation, Missouri had 19.1 insurance jobs for every thousand non-farm jobs in the state. In January of 2012, Missouri had raised that to 20.1 insurance jobs for every thousand non-farm jobs.

Ohio, prior to the incentive program, had 13.3 insurance jobs per thousand non-farm jobs. In January 2012, Ohio had raised insurance jobs for every thousand non-farm jobs to 14.9.

¹⁷http://difp.mo.gov/news/2011/Missouri_s_leadership_at_NAIC_grows

¹⁸<http://bswllc.com/changes-to-missouri-captive-insurance-legislation/>

¹⁹<https://legiscan.com/FL/bill/S7132/2013>

Building code changes. Additional legislative incentives involve building codes. Building code legislation has become a more pressing issue for insurance companies as the frequency of major storms has increased. According to the National Oceanic and Atmospheric Administration, there are “increasing trends in both the annual frequency of billion-dollar events and in the annual aggregate loss from these events.”²⁰

Since 2005, as a result of Hurricanes Katrina, Dennis and Rita, and Superstorm Sandy, the Property Casualty Insurers Association of America (PCI) has focused on encouraging lawmakers to adopt stronger building codes.²¹ The insurance industry sees the statewide adoption of minimum building codes to be an important step in reducing costs and keeping premiums low. Strict building codes benefit property insurers by reducing the costs of claims.

In 2014, Mississippi implemented a state-wide building code, which will help reduce the damage from major weather events, reducing insurance costs.

Following a devastating tornado in 2003, the city of Moore, Oklahoma adopted building codes that specifically address the threat of tornadoes.²²

In 2014, Mississippi implemented a state-wide building code, which will help reduce the damage from major weather events, reducing insurance costs.²³ The statewide bill was supported as a joint effort among the insurance industry, the state’s insurance commissioner, and the governor.

²⁰<http://www.ncdc.noaa.gov/billions/docs/smith-and-katz-2013.pdf>, p.3, retrieved: 3/29/2015

²¹<http://www.propertycasualty360.com/2014/12/29/miss-legislators-enact-first-statewide-building-co>, retrieved: 3/29/2015

²²<http://www.propertycasualty360.com/2014/12/29/miss-legislators-enact-first-statewide-building-co>, retrieved: 3/29/2015

²³<http://www.propertycasualty360.com/2014/12/29/miss-legislators-enact-first-statewide-building-co>, retrieved: 3/29/2015

Alabama attempted to pass a similar bill to the one passed in Mississippi, but it ultimately failed. The bill was reported to have been strongly considered, however, and the PCI anticipates that it will be reintroduced in 2015.²⁴

Building codes in New York State have room to improve. According to the Insurance Institute for Business & Home Safety (IBHS), New York State placed 12th in a study ranking 18 of the most hurricane-prone states. New York received a score of 56 out of 100, compared to eight states with scores above 80, due to its lack of statewide building codes.

Even though upfront costs increase, the IBHS highlights a study by Texas A&M University on the Texas Department of Insurance's building requirements for hurricanes, which found the benefits of building codes to exceed costs by a factor of 4.5 to 7.0.²⁵ A study by the IBHS after Hurricane Charley found that modern building codes decreased the costs of losses by 42 percent.²⁶

Insurance premium tax rates. Insurance premium tax rates vary from state to state, but can range from 0.5 percent to 4.35 percent, averaging slightly under 2 percent.²⁷ For comparison, New York State charges a premium tax rate of 1.75 percent on accident and health insurance and 2.00 percent on property-casualty insurance premiums.²⁸

In comparing the property-casualty rates, New York has an opportunity to lower rates for P&C premiums to become more business-friendly compared to neighboring states. For property-casualty premiums, surrounding states impose rates ranging from 1.25 percent to 2.1 percent, as indicated in Table 1.5.

New York is in line with the higher-rate states of Pennsylvania, Massachusetts and Vermont, but is less competitive compared to the states of New

Hampshire and Connecticut, with rates of only 1.25 percent and 1.75 percent, respectively. In other regions, Texas imposes a premium tax rate of 1.6 percent for property and casualty insurers.²⁹ Georgia has a state rate of 2.25 percent and a local rate of 2.5 percent for non-life insurance companies.³⁰

Table 1.5 lists P&C insurance premiums tax rates in New York and states neighboring New York for 2014.³¹

Table 1.5: P&C insurance premiums tax rate in New York and states neighboring New York, 2014

State	Tax rate
New York	2.00%
Connecticut	1.75%
Massachusetts	2.00%
New Hampshire	1.25%
New Jersey	2.10%
Pennsylvania	2.00%
Vermont	2.00%

Source: <http://www.nheconomy.com/uploads/NH%20VS%20NY%20Jan-14.pdf>

Table 1.6 provides a listing of incentives to attract insurance firms and expand insurance jobs across the U.S.

A study by the IBHS after Hurricane Charley found that modern building codes decreased the costs of losses by 42 percent.

²⁴<http://www.propertycasualty360.com/2014/12/29/miss-legislators-enact-first-statewide-building-co>, retrieved: 3/29/2015

²⁵Factor depends upon the size of the home affected.

²⁶<https://www.disastersafety.org/wp-content/uploads/IBHS-Rating-the-States-2015-Fundamentals.pdf>, retrieved: 4/1/2015

²⁷http://www.ncsl.org/documents/task_forces/State_Taxation_of_the_Insurance_Industry.pdf, retrieved: 4/3/2015.

²⁸<http://www.tax.ny.gov/bus/ct/article33.htm>, retrieved: 3/29/2015

²⁹http://www.window.state.tx.us/taxinfo/insurance/ins_ptli.html, retrieved: 3/29/2015

³⁰<http://www.oci.ga.gov/premiumtax/faq.aspx>, retrieved: 4/1/2015

³¹<http://www.nheconomy.com/uploads/NH%20VS%20NY%20Jan-14.pdf>, retrieved: 4/2/2015

Table 1.6: Incentives to attract insurance firms and expand insurance jobs in U.S. states**Formal structures for collaboration, support and advocacy.**

The establishment of the Insurance and Financial Services Cluster (IFS) in Connecticut in 2003 enables cooperation among educators, businesses, and government entities on issues and concerns of mutual interest that impact the business climate for the insurance industry.

In 2013, Ohio launched *Insuring Ohio Futures*, a statewide outreach and awareness program.³² Connected to this effort is the Ohio Military Veterans Initiative, and use of the *Ohio Means Jobs Military Skills Translator* to help veterans match their unique skills and experience to careers in the insurance industry.

Incentive programs leading to wider consumer choice

In February of 2014, Louisiana's Insurance Commissioner reported success in recruiting companies to the state's market through incentives, a de-population program and active recruiting – programs created in response to the effects of Hurricane Katrina on the Louisiana P&C industry.³³

In 2015, the Commissioner indicated that an incentive program, and efforts in active recruiting, have proven to be effective in attracting new business to Louisiana.

Approximately 17 percent of the property market has been redistributed from the three largest homeowner companies to smaller, regional companies that have moved to the state. In addition, market share for Louisiana Citizens Property Insurance Corporation, the state-sponsored market of last resort has reduced.³⁴

Tax reduction.

Ohio, ranking 7th in the nation for the number of insurance jobs, repealed its corporation franchise tax, a business privilege tax established in 1902, as of the 2014 tax year.³⁵ A 2014 study reported that the state will need 26,000 industry professionals by 2020.

New financial and investment incentives.

In 2009, Missouri Governor Jay Nixon signed House Bill 577, streamlining the process of moving insurance operations to the state. The bill made it easier for companies to bring their operations to Missouri by removing certain financial and investment restrictions and expanding organizational options.³⁶

In May 2013, Gov. Nixon signed Senate Bill 287, smoothing way for the formation of sponsored captive insurance companies as well as lowering the minimum capital and surplus requirements for captive insurance companies.³⁷

Maintaining incentives.

In 2013, Florida Senate bill 7132 bill, which threatened to revoke a years-long tax credit provided to insurance companies, died in chamber.³⁸

Building Code Changes

Moore, Oklahoma adopted building codes that specifically address the threat of tornadoes.³⁹

In 2014, Mississippi implemented a state-wide building code, which will help reduce the damage from major weather events, reducing insurance costs.⁴⁰ The statewide bill was supported as a joint effort among the insurance industry, the state's insurance commissioner, and the governor.

Alabama attempted to pass a similar bill to the one passed in Mississippi, but it ultimately failed. The bill was reported to have been strongly considered, and the PCI anticipates that it will be reintroduced in 2015.⁴¹

Insurance Premium Tax Rates

Insurance premium tax rates range from 0.5% to 4.35% across states, averaging slightly under 2%.⁴² New York State charges a premium tax rate of 1.75% on accident and health insurance and 2.00% on property/casualty insurance premiums.⁴³ For property casualty premiums, the surrounding states impose rates ranging from 1.25% to 2.0%, New York is less competitive compared to the states of New Hampshire and Connecticut, with rates of only 1.25% and 1.75%, respectively. In other regions, Texas imposes premium tax rate of 1.6% for property and casualty insurers.⁴⁴ Georgia has a state rate of 2.25% and a local rate of 2.5% for non-life insurance companies.⁴⁵

Compiled by Goss & Associates

³²<http://insuringohiofutures.com/>, retrieved on April 11, 2015.

³³<http://www.lidi.louisiana.gov/docs/default-source/documents/publicaffairs/commissionerscolumn/february-2014.pdf?sfvrsn=4>

³⁴<http://www.lidi.louisiana.gov/docs/default-source/documents/publicaffairs/commissionerscolumn/february-2015.pdf?sfvrsn=0>, retrieved on April 22, 2015

³⁵http://www.tax.ohio.gov/corporation_franchise.aspx

³⁶http://difp.mo.gov/news/2011/Missouri_s_leadership_at_NAIC_grows

³⁷<http://bswllc.com/changes-to-missouri-captive-insurance-legislation/>

³⁸<https://legiscan.com/FL/bill/S7132/2013>

³⁹<http://www.propertycasualty360.com/2014/12/29/miss-legislators-enact-first-statewide-building-co>, retrieved: 3/29/2015

⁴⁰<http://www.propertycasualty360.com/2014/12/29/miss-legislators-enact-first-statewide-building-co>, retrieved: 3/29/2015

⁴¹<http://www.propertycasualty360.com/2014/12/29/miss-legislators-enact-first-statewide-building-co>, retrieved: 3/29/2015

⁴²http://www.ncsl.org/documents/task_forces/State_Taxation_of_the_Insurance_Industry.pdf, retrieved: 4/3/2015

⁴³<http://www.tax.ny.gov/bus/ct/article33.htm>, retrieved: 3/29/2015

⁴⁴http://www.window.state.tx.us/taxinfo/insurance/ins_ptli.html, retrieved: 3/29/2015

⁴⁵<http://www.oci.ga.gov/premiumtax/faq.aspx>, retrieved: 4/1/2015

New York's Insurance Industry

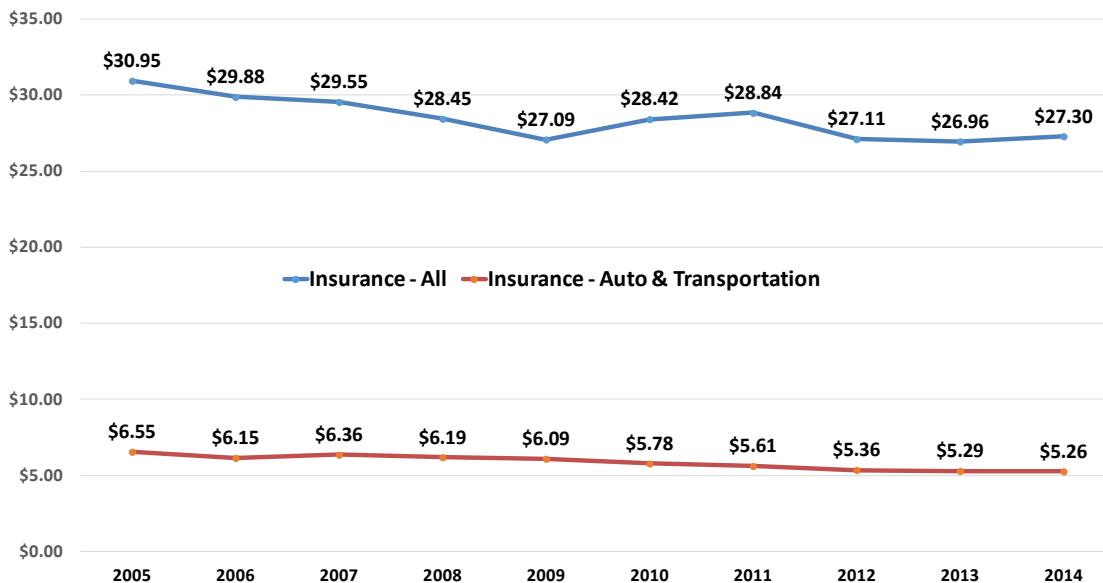
Productivity growth. Data in Tables 1.1 and 1.2 spotlight the advantage of increased productivity in terms of overall wages and in wage growth that the U.S. P&C insurance industry has experienced from 2007 to 2013. Productivity growth has been a prime contributing factor to these pay achievements. Moreover, over the last 10 years, productivity growth in the insurance industry has resulted in U.S. households devoting a smaller share of their spending budgets to insurance.

U.S. insurance spending per \$1,000 of total spending is shown in Figure 1.3. As presented, Americans have reduced their insurance spending from \$30.95 per \$1,000 of total spending in 2005 to \$27.30 per \$1,000 of total spending in 2014. Likewise, due to insurance productivity growth, U.S. households have steadily reduced their spending on automobile and transportation insurance from \$6.55 per \$1,000 of spending in 2005 to \$5.26 per \$1,000 of spending in 2014.

Auto insurance makes up nearly 40 percent of total P&C premiums written,⁴⁶ and the steadily-declining consumer spending number appears to indicate a negative trend on this factor. However, this decline is offset by innovations in risk management and policy distribution channels (e.g. direct-to-consumer) which have reduced expenses and allowed for more competitive pricing.⁴⁷

Moreover, over the last 10 years, productivity growth in the insurance industry has resulted in U.S. households devoting a smaller share of their spending budgets to insurance.

Figure 1.3: U.S. insurance spending per \$1,000 of total spending, 2005-2014



Source: Goss & Associates based on U.S. BEA data

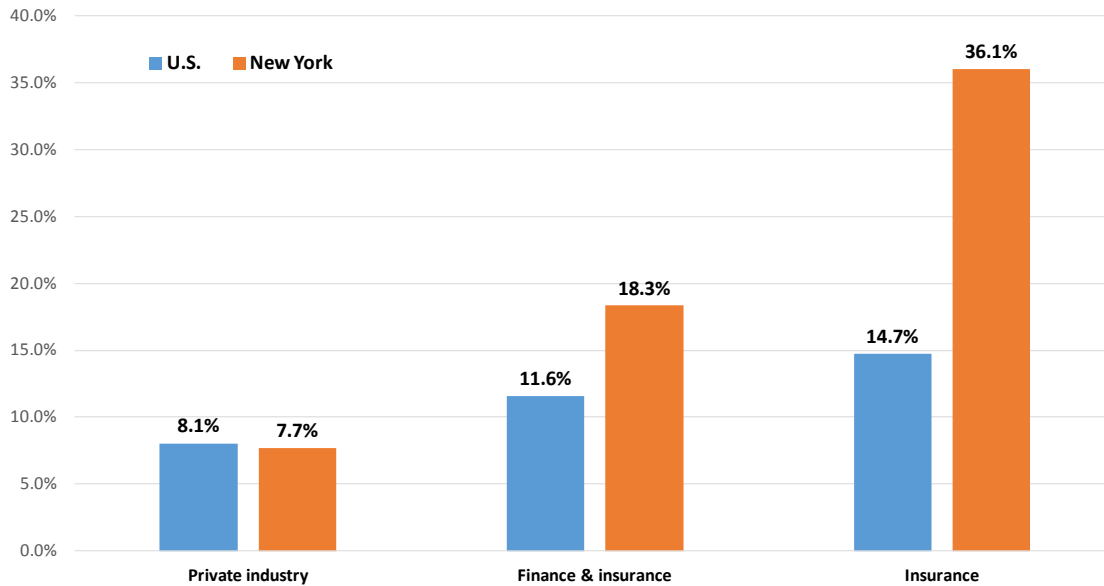
⁴⁶http://www.naic.org/documents/research_top_25_market_share_pc.pdf

⁴⁷[http://www.ey.com/Publication/vwLUAssets/ey-2015-us-property-casualty-insurance-outlook/\\$FILE/ey-2015-us-property-casualty-insurance-outlook.pdf](http://www.ey.com/Publication/vwLUAssets/ey-2015-us-property-casualty-insurance-outlook/$FILE/ey-2015-us-property-casualty-insurance-outlook.pdf)

Figure 1.4 shows productivity growth for the U.S. and New York between 2005 and 2012.⁴⁸ As listed, New York and the U.S. experienced similar private industry productivity growth of 7.7 percent and 8.1 percent, respectively. The finance and insurance industries as a combined category saw productivity growth increase by 18.3 percent in New York and 11.6 percent throughout the entire U.S. This trend is even more apparent, particularly in New York's case, when looking at a category that focuses specifically on the insurance industry. New York's productivity growth in the insurance industry was nearly two and one-half times that of the U.S. insurance industry. New York's insurance industry productivity increased by 36.1 percent compared to a U.S. increase of only 14.7 percent.

Expansion due to productivity growth, as compared to employment growth, has driven this recent trend. But as the sector continues to grow in New York, hiring should follow with positive employment numbers. A recent U.S. Insurance Labor Outlook Study has validated this positive trend.⁴⁹ According to the report, specialty underwriters and claims professionals are in high demand throughout the P&C industry. These higher-wage jobs will continue to contribute toward higher productivity levels and will continue to underscore the importance of the insurance industry to New York.

Figure 1.4: Productivity growth, U.S. versus New York, 2005-2012



Source: Goss & Associates calculation based on Census and U.S. BEA Data

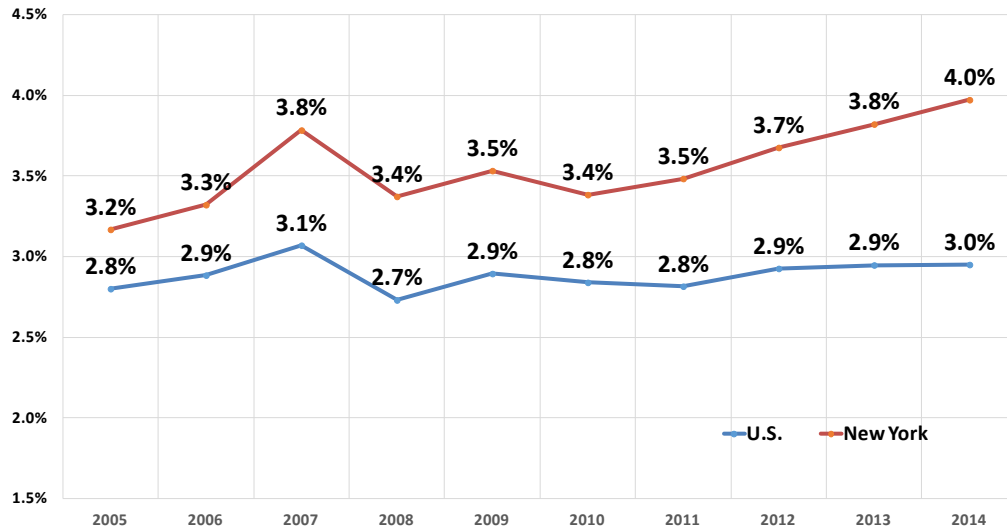
⁴⁸Productivity growth is real (inflation adjusted) GDP per worker. Technically, productivity growth is defined as GDP per hour growth. However, the number of work hours was not available for the insurance industry. GDP for the insurance industry was not available for 2013 and later at the time of the completion of this study.

⁴⁹“P/C Insurance is ‘Hottest’ Hiring Market in Years: Labor Study”, accessed at <http://www.carriermanagement.com/news/2015/03/08/136432.htm>

Figure 1.5 indicates that the insurance industry continues to gain importance as a component of New York State's economy. Since the recession of 2008-2009, the share of New York's GDP contributed by the insurance industry has increased steadily, rising from 3.4 percent in 2010 to nearly 4.0 percent in

2014. This rise has significantly outpaced the insurance industry's contribution in the U.S. as a whole, indicating that the insurance industry plays a greater role in economic growth for the State of New York relative to the insurance industry's effect on the U.S. economy overall.

Figure 1.5: The insurance industry as a percentage of private industry GDP, New York and U.S., 2005-2014



Source: Goss & Associates based on U.S. BEA Data

Summary

New York is among U.S. leaders in terms of wages & salaries and productivity growth within its insurance industry. The preceding high-level view of the insurance industry in New York has demonstrated that the industry is an important component of New York's economic development and overall economy.

The insurance industry's growing importance is due to its relatively large share of the state's entire economy and the quality of jobs that the industry requires, which continue to be increasingly higher-skilled and higher-paying, as indicated by greater productivity measures. Subsequent sections of this report calculate and examine the economic impact of the insurance industry on the state of New York.

Productivity growth, as compared to employment growth, has driven this recent expansion. But as the sector continues to grow in New York, hiring should follow with positive employment numbers. A recent U.S. Insurance Labor Outlook Study has indicated this positive trend.⁵⁰ According to the report, specialty underwriters and claims professionals are in high demand throughout the P&C industry. These higher-wage jobs will continue to contribute toward higher productivity levels and will continue to underscore the importance of the insurance industry to New York.

⁵⁰ "P/C Insurance is 'Hottest' Hiring Market in Years: Labor Study", accessed at <http://www.carriermanagement.com/news/2015/03/08/136432.htm>

Section 2: P&C Insurance Purchases of Municipal Bonds - Benefits to New York Taxpayers

Section Highlights:

- Recent data show that the P&C industry invested 35.4 percent of their fixed income investment portfolio in 2012 and 34.2 percent in 2013 in state and local municipal bonds.
- P&C companies are consistently one of the largest purchasers of municipal bonds in the country, having been the fourth largest in 2013 and fifth largest in 2012. In 2013, only households, mutual funds, and commercial banks exceeded P&C companies' purchases of municipal bonds.⁵¹
- By increasing the demand for municipal bonds, P&C bond purchases support higher prices and lower interest rates on municipal bonds, producing significant savings for the New York taxpayer.
- P&C municipal bond purchases in New York over the past eight years lowered interest rates on bond issuances by an average of 0.47 percentage points, or 47 basis points.⁵²
- Between 2006 and 2013, P&C purchases of municipal bonds saved New York taxpayers an average of \$152.3 million annually, or a total of \$1,218.4 million.

Introduction

P&C insurance firms invest the net premiums collected in state and local municipal bonds, helping to fund the building of roads, schools and other public projects. The municipal bond funds also ensure that the money is readily available when it is necessary for insurance firms to pay damage claims. Furthermore, P&C firms provide businesses with capital for research, expansions and other ventures through their investments in corporate equities and bonds.

In addition, P&C bond buying lowers the cost of borrowing for state and local government agencies. By competing with other buyers of municipal

⁵¹It should be noted that P&C employee purchases of municipal bonds are included in both households and mutual funds.

⁵²A basis point is 1/100 of a percentage point.

bonds, P&C firms increase the demand and price of the bonds. This has the impact of lowering interest rates and borrowing costs on the bonds, producing savings to taxpayers in the state.

Municipal Bond Buying by Industry

When compared to all other investors in various classes of investments, the Federal Reserve (Fed) concluded that P&C companies are among the largest holders of municipal bonds, but rank lower in terms of holdings of corporate and foreign bond holdings and U.S. corporate equities. Table 2.1 ranks purchasers of municipal bonds for 2012 and 2013.

P&C bond purchases support higher prices and lower interest rates on municipal bonds, producing significant savings for the New York taxpayer.

As presented in Table 2.1, P&C insurance companies purchased 8.9 percent of total municipal securities in 2013, more than double the amount that life insurance firms purchased. P&C insurance companies ranked fourth in 2013.

P&C purchases in 2013 were similar in terms of dollar amount and percent of total, but their standing moved up to the fourth largest purchaser as money market mutual funds decreased purchases from 2012 to 2013.

Between 2006 and 2013, P&C purchases of municipal bonds saved New York taxpayers an average of \$152.3 million annually, or a total of \$1,218.4 million.

Table 2.1: U.S. municipal securities and loans, 2012 and 2013

	Amount in billions		Percent of total	
	2012	2013	2012	2013
Households	\$1,662.1	\$1,618.2	44.7%	44.1%
Mutual funds	\$627.4	\$613.9	16.9%	16.7%
Commercial banks	\$365.0	\$418.9	9.8%	11.4%
P&C insurance companies	\$328.1	\$325.8	8.8%	8.9%
Money market mutual funds	\$336.7	\$308.3	9.1%	8.4%
Life insurance companies	\$131.5	\$141.6	3.5%	3.9%
Closed-end funds	\$85.9	\$84.3	2.3%	2.3%
Brokers and dealers	\$26.6	\$18.6	0.7%	0.5%
Government sponsored enterprises	\$17.0	\$13.4	0.5%	0.4%
Savings institutions	\$7.7	\$9.4	0.2%	0.3%
Rest of the world	\$126.5	\$118.8	3.4%	3.2%
Total	\$3,715.5	\$3,671.2	100.0%	100.0%

Source: Calculated by Goss & Associates from Federal Reserve data.

According to Fed data, the P&C industry distributed its fixed income investments in 2012 as follows: 35 percent in municipal bonds, 41 percent in corporate and foreign bonds, 22 percent in treasury/government agency bonds and one percent in other fixed income.⁵³

In 2013, the P&C industry distributed its fixed income investments in a similar fashion: 34 percent in municipal bonds, 43 percent in corporate and foreign bonds, 21 percent in treasury/government agency bonds and two percent in other fixed income.⁵⁴

Figure 2.1 compares total state and local debt to P&C municipal bond holdings between 2010 and 2013.⁵⁵ As shown, P&C firms held \$348.4 billion, or 11.5 percent of total state and local debt in 2010, and \$325.8 billion, or 11.1 percent of total state and local debt in 2013. While there has been a decline in the share held by the industry, P&C firms remain a very important source of funding supporting the expansion

⁵³Source: Federal Reserve data: Z.1 Financial Accounts of the United States: Flow of Funds, Balance Sheets, and Integrated Macroeconomic Accounts, Third Quarter 2014. Accessed at: <http://www.federalreserve.gov/releases/z1/current/z1.pdf>. Data in Table 2.1 and Figure 2.1 are not directly comparable since bond purchases in Table 2.1 may be double counted.

⁵⁴Federal Reserve data: Z.1 Financial Accounts of the United States: Flow of Funds, Balance Sheets, and Integrated Macroeconomic Accounts, Third Quarter 2014. Accessed at: <http://www.federalreserve.gov/releases/z1/current/z1.pdf>

⁵⁵Estimates by Goss & Associates based on data from the Federal Reserve.

sion in state and local spending and debt.

Figure 2.2 details the areas of support by P&C purchases for 2012.⁵⁶ As shown, of P&C municipal bond purchases in 2012, 30 percent supported education spending, 16 percent aided utility expansions, and 14 percent supported transportation expenditures. The remaining 40 percent of purchases were across a broad range of state and local infrastructure spending demands.

According to a 2007 Insurance Research Council study, P&C insurers held more than \$22 billion in New York State municipal bonds in 2005, with transportation projects accounting for the largest share, or 26 percent of the total combined value of all municipal bonds held by insurers in the state.

Also, as shown in Figure 2.3, New York's P&C industry held an estimated \$21.9 billion in municipal bonds in 2013 which is down from the peak of \$32.9 billion held by the P&C sector in 2008.^{57,58}

⁵⁶Source: Figures reported by the National Association of Insurance Commissioners, accessed at: http://www.naic.org/capital_markets_archive/130701.htm

⁵⁷In 2005, New York's P&C industry held \$22.0 billion in municipal bonds and accounted for 7.4 percent of total industry wages and salaries.

⁵⁸The 2012 figure was reported by the National Association for Insurance Commissioners, accessed at: http://www.naic.org/capital_markets_archive/130701.htm; the 2013 figure was estimated based on ratios derived from the 2012 reported figure.

Figure 2.1: P&C municipal bonds held vs. total state and local government debt (in billions)

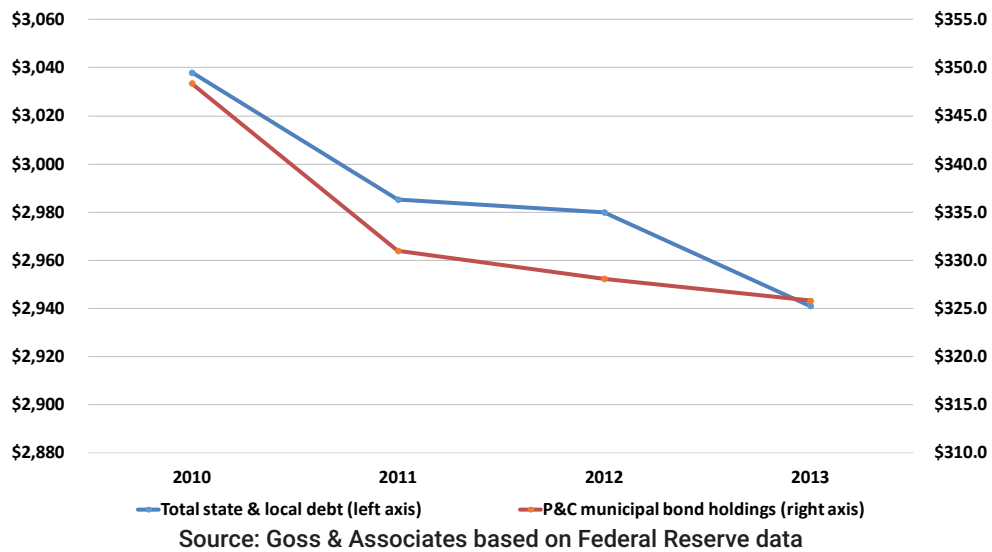
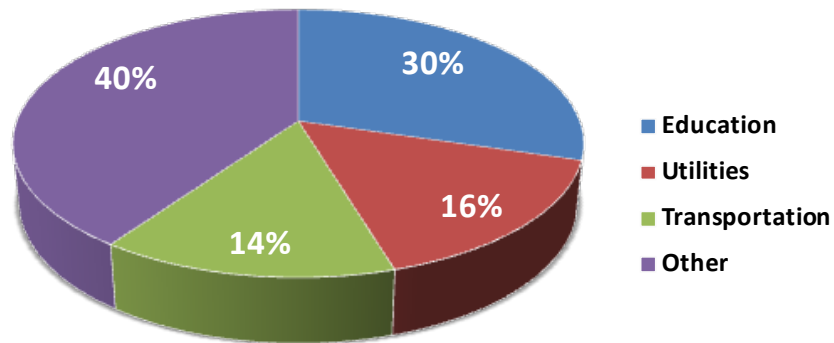
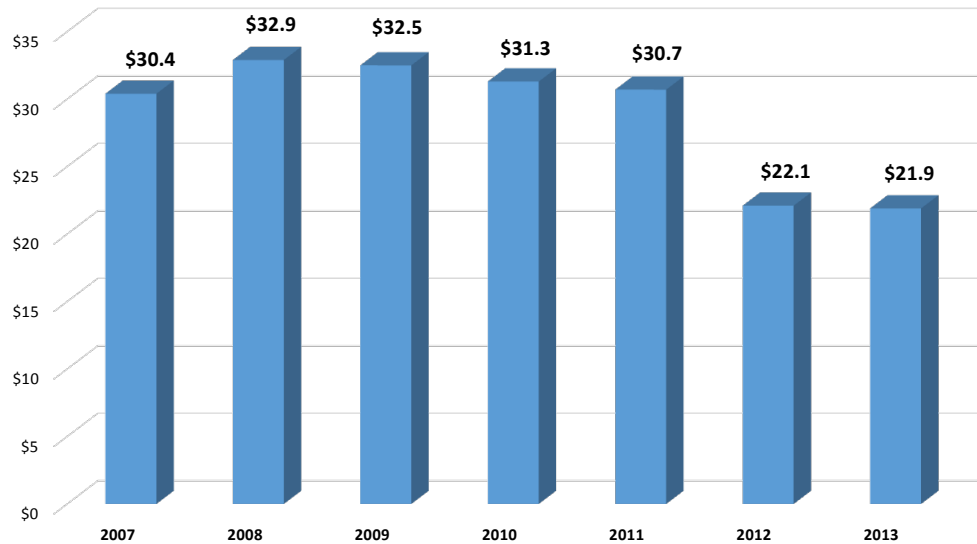


Figure 2.2: Purposes of municipal bonds held by U.S. P&C industry in 2012



Source: Goss & Associates based on Federal Reserve Data

New York P&C buying of New York municipal bonds reduced the effective interest rate on the bonds, saving New York taxpayers millions of dollars each year.

Figure 2.3: Estimated New York P&C municipal bond holdings, 2007-2013 (in billions)

Source: Goss & Associates based on Federal Reserve Data

By purchasing municipal bonds, New York P&C firms increased the demand and prices of bonds sold both by the initial issuers and by bond holders in the secondary market for municipal bonds. This buying increased the price and reduced the yield (effective interest rate) on the municipal bonds.

Figure 2.4 compares New York municipal bond purchases with and without New York P&C purchases.⁵⁹

Between 2006 and 2013, the average yield on municipal bonds was 4.38 percent. It is estimated that without P&C purchases of municipal bonds, the yield, or effective interest rate, on the bonds would have been 4.85 percent, or an increase

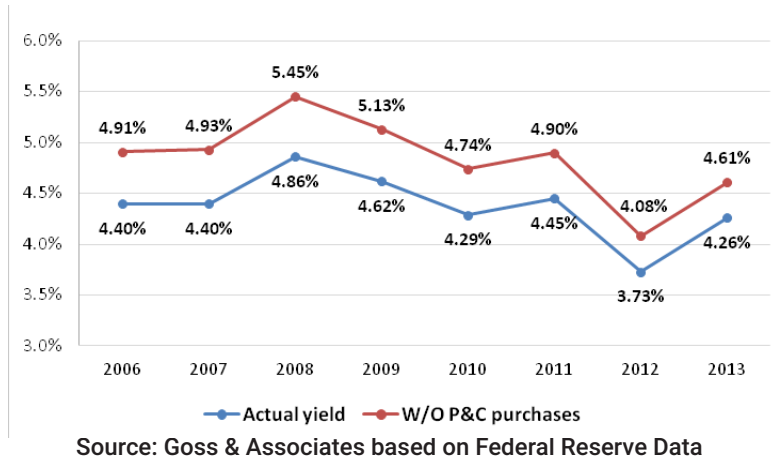
in costs to state and local governments of an average of 0.47 percentage points, or 47 basis points, over the eight-year period.

That is, the gap, or added interest rate, that would have to be paid by New York state and local government agencies would have been 0.51 percent in 2006. By 2013, it is estimated that the additional interest rate charged declined to 0.35 percent.

Applying this interest rate savings to actual bond issuances by New York state and local government agencies between 2006 and 2013 produces the actual costs and the estimated costs without P&C bond buying. The difference between the two is the savings that would accrue to the New York taxpayer.

⁵⁹It is assumed that New York P&C bond purchases were for New York state and local government agencies.

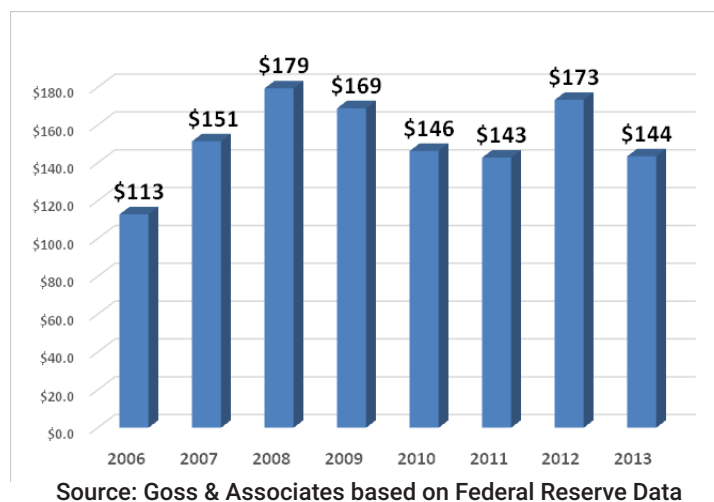
Figure 2.4: Municipal bond yields with and without P&C purchases, 2006-2013



As shown in Figure 2.5., estimated New York taxpayer savings rose from \$112.8 million in 2006 to a high of \$179.4 million in 2008. In 2013, estimated savings totaled \$144 million, which was on the high end as well, because total bond issuances in the state were comparably higher that year.⁶⁰ Thus over the time period 2006 to 2013, New York P&C municipal bond purchases saved New York taxpayers \$1,218.4 million.

Over the time period 2006 to 2013, New York P&C municipal bond purchases saved the New York taxpayer \$1,218.4 million.

Figure 2.5: Estimated interest savings, 2006-2013 (in millions)



Summary

New York’s P&C industry annually purchases municipal bonds supporting a broad array of public projects. These purchases lower the effective interest rate paid by New York taxpayers. In 2013 alone, it is estimated that P&C municipal bond purchases saved New York taxpayers \$143.5 million.

⁶⁰Savings figures for 2012 and 2013 were estimated using bond issuance amounts reported by *The Bond Buyer*, a definitive news source on municipal bonds, accessed at: http://www.bondbuyer.com/pdfs/2013_stats_supp.pdf

Section 3: Estimated Economic Impacts

Section Highlights:

- Every 1,000 New York P&C jobs support another 1,639 in non-P&C firms in New York.
- P&C insurance spending in New York supports jobs that provide a 28.4 percent pay advantage over the average New York job.
- Each New York P&C job creates almost \$40,600 in state and local taxes annually.
- The average pay supported by New York's P&C industry, both direct and indirect, was approximately \$81,916 for 2014, which was 28.4 percent higher than the average pay for all New York jobs.
- In 2014, the P&C industry is estimated to have contributed nearly \$38.0 billion to the New York economy. Independent P&C firms accounted for \$21.6 billion (56.8 percent) of that total.
- In 2015, it is estimated that the P&C industry will contribute \$38.1 billion to the New York economy.
- In 2014, the P&C industry is estimated to have supported, directly and indirectly, approximately 151,685 jobs, with independent P&C firms accounting for 86,309 of that total.
- For 2015, the P&C industry is estimated to support approximately 153,732 jobs in New York.

The average pay supported by New York's P&C industry, both direct and indirect, was approximately \$81,916 for 2014, which was 28.4 percent higher than the average for all New York jobs.

In 2014, the P&C industry is estimated to have supported, directly and indirectly, approximately 151,685 jobs, with independent P&C firms accounting for 86,309 of that total.

Direct P&C Spending

The expenditures of New York P&C firms provide a source of jobs and income for residents of the state. This spending for locally-supplied goods and services consists of construction outlays; equipment and supply purchases; and spending by P&C firms and their employees.

This initial spending leads to further spending for residents, with a resultant impact that is a multiple of "first round" spending. Thus, the impact of New York P&C firms continues after the initial money is spent for goods and services as it supports many enterprises and individuals that are indirectly linked to the P&C industry.

In this chapter, the impact of New York P&C firms is estimated for 2014 and projected for the period 2015-2018. Using Input-Output multipliers, the study provides sales, earnings and job impacts in addition to estimating the impact of the initial spending on state and local tax collections.

Every 1,000 New York P&C jobs support another 1,639 in non-P&C firms in New York.

Input-Output multipliers show how spending initiated in one industry, P&C insurance in this case, is filtered throughout the state economy. For each dollar generated by P&C firms, there are direct effects for the initial spending plus spillover impacts into the rest of the state economy.

Input-Output multiplier models are the most frequently-used type of analysis tool for economic impact assessment. The multiplier system that will be used is IMPLAN.⁶¹ This is a widely-used and accepted methodology and is described in more detail in Appendices A and B.

Impacts are estimated for a) the state, b) individual industries, c) each New York county, d) each New York senate district, e) each New York assembly district and f) each New York economic development region. The results presented in this study are generated for 2014. Estimates for 2015-2018 are also provided with financial data discounted to present, or 2015, values.

Total Impact on New York Economic Activity

The first step in measuring impacts was to input 2014 P&C jobs, which are the direct impacts,⁶² into the IMPLAN Multiplier System. Table 3.1 lists total impacts which represent the direct, plus indirect and induced impacts. As indicated, the 2014 spending generated a total of nearly \$38.0 billion in sales, approximately \$12.4 billion in wages and salaries, more than \$1.4 billion in self-employment income, and supported 151,685 jobs.

Over the five-year period 2014-2018, New York P&C spending will produce approximately \$191.9 billion in output,⁶³ more than \$63.8 billion in wages and salaries, almost \$7.5 billion in self-employment income,⁶⁴ and support an average of 158,737 jobs annually. According to these estimates, the ratio of total jobs supported for every P&C job for 2014 was 2.639.⁶⁵ Thus, each 1,000 P&C job supports another 1,639 jobs in spillover impacts.

Over the five-year period 2014-2018, New York P&C spending will produce approximately \$191.9 billion in output, more than \$63.8 billion in wages and salaries, almost \$7.5 billion in self-employment income, and support an average of 158,737 jobs annually.

P&C jobs versus average New York job. As listed in Table 3.1, P&C firms supported average wages and salaries per job of \$81,916 in 2014 and will support average wages and salaries per job of \$81,694 from 2015 to 2018. This pay per worker is significantly higher than the state average for all New York wage and salary jobs of \$63,794. That is, P&C insurance spending in New York supports jobs that provide a 28.4 percent pay advantage over the average New York job.⁶⁶

⁶¹IMPLAN (for Impact Analyses and Planning) is a computer software package that consists of procedures for estimating local input-output models. Since 1993, the Minnesota Implan Group Inc. in Stillwater, Minnesota with exclusive rights has continued development and maintenance of the IMPLAN system. This group licenses and distributes the software to users. Goss & Associates is a licensed user of Implan.

⁶²Implan allows the input of spending or job data. Normally job data are much more reliable and up-to-date than spending data and are used as input here.

⁶³Output or total impacts include salary and wages, self-employment income, and state and local taxes.

⁶⁴Self-employment income includes earnings for self-employed individuals such as attorneys, accountants and consultants.

⁶⁵Total jobs created for 2014 was 151,685 from 57,475 P&C jobs or a 2.64 ratio.

⁶⁶Pay for P&C linked jobs for 2014 is \$81,916 compared to the average pay for all New York jobs of \$57,651

**Table 3.1 Estimated impacts - 2014-2019 (all financial data discounted to present, or 2015, values)
All P&C Firms**

	2014	2015-2018	Totals 2014-2018
Sales or business volume	\$38.0 billion	\$153.9 billion	\$191.9 billion
Wages & salaries	\$12.4 billion	\$51.4 billion	\$63.8 billion
Self-employment income	\$1.4 billion	\$6.1 billion	\$7.5 billion
Average year-round jobs	151,685	157,347	158,737
Wages & salaries per job	\$81,916	\$81,694	\$80,438

Source: Goss & Associates from IMPLAN Multiplier System

Independent P&C versus captive P&C. The estimates contained in Table 3.1 are for both independent and captive P&C firms. It is estimated that independent P&C firms account for 56.9 percent of total economic activity in the P&C sector.⁶⁷ Based on this share of the market, impacts for independent P&C are listed in Table 3.2.^{68,69}

**Table 3.2: Estimated impacts for 2014-2018 (all financial data discounted to present, or 2015, value)
Independent P&C Firms**

	2014	2015-2018	Totals 2014-2018
Sales or business volume	\$21.6 billion	\$87.6 billion	\$109.2 billion
Wages & salaries	\$7.1 billion	\$29.3 billion	\$36.3 billion
Self-employment income	\$812.0 million	\$3.4 billion	\$4.3 billion
Average year-round jobs	86,309	89,530	90,322
Average salary for job supported	\$81,916	81,694	80,438
Total state & local taxes	\$1.3 billion	\$5.4 billion	\$6.7 billion

Source: Goss & Associates from IMPLAN Multiplier System

⁶⁷Estimates based on independent agents writing 56.9% of the P&C market. ("2012 Property-Casualty Insurance Market: Opportunities & Competitive Challenges For Independent Agents & Brokers", access at: <https://www.independentagent.com/Resources/Research/SiteAssets/MarketShareReport/IIABA-2014-Marketshare-Report-2012-Data-FINAL.pdf>).

⁶⁸Output or total impacts include salary and wages, self-employment income, and state and local taxes.

⁶⁹Self-employment income includes earnings for self-employed individuals such as attorneys, accountants and consultants.

Impact on state and local tax collections.

Through the spending related to the operations of New York P&C firms, state and local tax collections are created. Table 3.3 provides detailed estimates of the impact on state and local taxes. As indicated, the outcome will be nearly \$11.8 billion in state and local tax collections between 2014 and 2018, approximately \$2.3 billion of that for 2014.

U.S. Census data show that total New York state and local tax collections for 2012 were \$151.7 billion. Assuming state and local tax collections expanded at the pace that New York's state and local tax collections expanded over the past 10 years, it is concluded that the P&C industry, both directly and indirectly, accounted for 1.38 percent of total state and local tax collections in 2014.⁷⁰

Impacts by industry. Table 3.4⁷¹ lists im-

pacts by industry for 2014. As indicated, the top industries to experience spillover sales or output impacts, outside of insurance, were the real estate industry with more than \$998.3 million, depository credit intermediation firms with \$612.1 million, and private hospitals with almost \$593.0 million in total impacts or sales/revenues.

According to estimates contained in Table 3.4, jobs supported by P&C spending earned an average of \$209,188 in securities and commodities trading, \$147,863 in electric power generation, and \$104,786 in credit intermediation in 2014. Furthermore, each New York P&C job creates approximately \$40,600 in state and local taxes each year.⁷²

Table 3.3: Impact on state and local tax collections, 2014-2018 (discounted to present, or 2015, value)

Type of Tax	2014	2015-2018	Totals 2014-2018
Sales	\$547.4 million	\$2.2 billion	\$2.7 billion
Individual income	\$511.0 million	\$2.1 billion	\$2.6 billion
Corporate income	\$316.6 million	\$1.3 billion	\$1.6 billion
Property	\$681.5 million	\$2.7 billion	\$3.4 billion
Other	\$282.0 million	\$1.2 billion	\$1.4 billion
Total state and local tax collections	\$2.3 billion	\$9.4 billion	\$11.8 billion

Source: Goss & Associates from IMPLAN Multiplier System

... the top industries to experience spillover sales or output impacts, outside of insurance, were the real estate industry with more than \$998.3 million, depository credit intermediation firms with \$612.1 million, and private hospitals with \$593.0 million in total impacts or sales/revenues.

⁷⁰Between 2002 and 2012, New York state and local tax collections expanded by a compound annual rate of 5.5 percent.

⁷¹Equal to total wages and salaries per year divided by jobs supported.

⁷²State and local taxes of \$2,338,501,388 for 57,475 direct P&C jobs.

Table 3.4: Impacts to the state of New York by industry (top 20 industries) 2014 only

Industry	Output	Wages & salaries	Self-employment income	Jobs	Wages & salaries per job
Insurance carriers	\$17,852,686,336	\$3,675,682,048	\$79,945,488	33,895	\$108,443
Insurance agencies, brokerages, & related	\$8,245,050,880	\$4,681,925,120	\$752,583,936	45,281	\$103,398
Real estate establishments	\$998,308,352	\$94,365,000	\$18,490,916	3,972	\$23,759
Monetary & depository credit intermediation	\$612,117,504	\$109,128,976	n.a.	1,041	\$104,786
Private hospitals	\$592,988,864	\$301,207,872	\$2,770,084	3,614	\$83,343
Offices of physicians, dentists, and other health practitioners	\$477,054,816	\$208,852,016	\$75,452,856	3,185	\$65,576
Food services/drinking places	\$448,848,032	\$157,317,008	\$10,079,360	6,287	\$25,022
Telecommunications	\$384,742,016	\$66,131,728	\$3,655,794	620	\$106,736
Nondepository credit intermediation and related	\$379,043,424	\$200,557,728	\$22,049,406	1,496	\$134,107
Legal services	\$370,911,104	\$120,850,160	\$55,820,740	1,357	\$89,035
Wholesale trade businesses	\$346,169,344	\$164,975,184	\$16,581,862	1,931	\$85,452
Securities, commodity contracts, investments, and related activities	\$333,717,600	\$375,755,552	-\$22,895,214	1,796	\$209,188
Funds, trusts, and other financial vehicles	\$296,957,440	\$37,173,800	\$42,018,216	454	\$81,855
Accounting, bookkeeping, & payroll services	\$270,455,552	\$87,738,832	\$44,811,248	1,319	\$66,513
Employment services	\$268,676,480	\$181,033,888	\$21,826,896	4,397	\$41,170
Management, scientific, and technical consulting services	\$187,854,464	\$85,475,616	\$36,225,524	840	\$101,696
Other state and local government enterprises	\$175,567,248	\$51,190,380	n.a.	550	\$93,041
Nursing and residential care facilities	\$174,527,824	\$93,346,232	\$4,067,655	2,173	\$42,948
Private junior colleges, colleges, universities, and professional schools	\$167,684,816	\$84,514,088	\$2,723,449	1,359	\$62,168
Electric power generation, transmission, & distribution	\$160,205,072	\$34,025,796	\$4,435,240	230	\$147,863
All other industries	\$5,235,642,560	\$1,614,212,386	\$256,466,892	35,886	\$44,981
Total	\$37,979,209,728	\$12,425,459,410	\$1,427,110,348	151,685	\$81,916 (avg)

Source: Goss & Associates from IMPLAN Multiplier System

Impacts by New York county. Table 3.5 lists overall, or output, impacts by county. As presented, New York County received the largest total impact of \$11.6 billion and Nassau County experienced the second largest total impact at approximately \$7.1 billion. At the other end of the spectrum, the smallest output impacts were experienced by Hamilton County with \$0.5 million and Seneca County with \$2.1 million. Tables 3.6 through 3.8 present impacts by county in terms of wages and salaries, self-employments, and jobs respectively.

Table 3.5: Total impacts of P&C industry by county, 2014 (in 2015 dollars)

Albany	\$1,703,240,960	Niagara	\$54,326,327
Allegany	\$60,219,820	Oneida	\$762,620,940
Bronx	\$140,178,686	Onondaga	\$1,642,676,386
Broome	\$183,415,272	Ontario	\$33,948,599
Cattaraugus	\$21,271,749	Orange	\$95,787,826
Cayuga	\$59,074,572	Orleans	\$11,751,870
Chautauqua	\$44,163,682	Oswego	\$63,019,365
Chemung	\$168,424,117	Otsego	\$594,382,166
Chenango	\$286,260,794	Putnam	\$19,743,515
Clinton	\$22,308,056	Queens	\$735,195,198
Columbia	\$16,502,639	Rensselaer	\$32,283,630
Cortland	\$11,488,597	Richmond	\$94,911,048
Delaware	\$16,309,151	Rockland	\$240,939,173
Dutchess	\$255,107,633	Saratoga	\$1,527,574,271
Erie	\$4,280,809,038	Schenectady	\$44,398,713
Essex	\$6,217,109	Schoharie	\$80,207,288
Franklin	\$14,209,278	Schuyler	\$3,116,862
Fulton	\$23,931,049	Seneca	\$2,070,078
Genesee	\$17,242,097	St. Lawrence	\$12,847,729
Greene	\$15,315,061	Steuben	\$23,342,094
Hamilton	\$459,508	Suffolk	\$2,247,913,145
Herkimer	\$14,287,674	Sullivan	\$70,674,247
Jefferson	\$67,725,141	Tioga	\$14,388,696
Kings	\$971,314,347	Tompkins	\$134,142,090
Lewis	\$2,770,799	Ulster	\$83,865,465
Livingston	\$7,463,281	Warren	\$323,120,543
Madison	\$19,057,483	Washington	\$13,127,053
Monroe	\$772,730,356	Wayne	\$57,775,722
Montgomery	\$57,061,397	Westchester	\$1,018,690,196
Nassau	\$7,071,375,950	Wyoming	\$12,768,065
New York	\$11,594,784,760	Yates	\$2,881,379
Total all counties		\$37,979,209,728	

Source: Goss & Associates from IMPLAN Multiplier System

Table 3.6: Wages & salaries impact of P&C industry by county, 2014 (in 2015 dollars)

Albany	\$502,751,810	Niagara	\$16,406,678
Allegany	\$12,404,046	Oneida	\$161,308,552
Bronx	\$45,644,114	Onondaga	\$490,484,561
Broome	\$39,947,723	Ontario	\$9,868,844
Cattaraugus	\$5,585,361	Orange	\$27,330,446
Cayuga	\$9,560,394	Orleans	\$2,877,840
Chautauqua	\$10,591,278	Oswego	\$12,181,044
Chemung	\$36,826,578	Otsego	\$137,777,368
Chenango	\$57,083,752	Putnam	\$5,286,077
Clinton	\$6,009,628	Queens	\$194,041,954
Columbia	\$3,762,801	Rensselaer	\$10,118,182
Cortland	\$3,934,162	Richmond	\$25,785,124
Delaware	\$3,403,864	Rockland	\$59,683,616
Dutchess	\$69,168,248	Saratoga	\$340,622,767
Erie	\$1,222,569,829	Schenectady	\$14,362,339
Essex	\$2,090,457	Schoharie	\$21,961,765
Franklin	\$3,692,936	Schuyler	\$1,048,022
Fulton	\$5,247,538	Seneca	\$696,048
Genesee	\$4,393,836	St. Lawrence	\$2,681,889
Greene	\$4,278,368	Steuben	\$6,906,894
Hamilton	\$154,506	Suffolk	\$574,587,622
Herkimer	\$3,176,484	Sullivan	\$11,168,649
Jefferson	\$14,840,756	Tioga	\$3,541,375
Kings	\$215,401,635	Tompkins	\$33,693,480
Lewis	\$931,660	Ulster	\$24,198,110
Livingston	\$2,509,473	Warren	\$71,892,752
Madison	\$5,132,427	Washington	\$2,746,783
Monroe	\$222,221,581	Wayne	\$9,454,484
Montgomery	\$10,928,391	Westchester	\$323,582,662
Nassau	\$2,018,578,154	Wyoming	\$2,880,720
New York	\$5,282,492,135	Yates	\$968,842
Total all counties		\$12,425,459,410	

Source: Goss & Associates from IMPLAN Multiplier System

Table 3.7: Self-employment income impacts of P&C industry by county, 2014 (in 2015 dollars)

Albany	\$43,408,486	Niagara	\$3,109,664
Allegany	\$4,434,400	Oneida	\$13,681,605
Bronx	\$11,899,125	Onondaga	\$23,689,747
Broome	\$6,582,681	Ontario	\$2,535,867
Cattaraugus	\$1,611,078	Orange	\$6,035,034
Cayuga	\$2,928,944	Orleans	\$598,825
Chautauqua	\$3,053,574	Oswego	\$2,937,081
Chemung	\$5,165,618	Otsego	\$5,437,298
Chenango	\$4,375,235	Putnam	\$1,294,193
Clinton	\$1,558,883	Queens	\$31,807,439
Columbia	\$1,338,321	Rensselaer	\$2,171,999
Cortland	\$929,716	Richmond	\$6,372,627
Delaware	\$1,595,442	Rockland	\$26,945,303
Dutchess	\$12,887,730	Saratoga	\$45,457,649
Erie	\$58,836,907	Schenectady	\$3,153,639
Essex	\$533,276	Schoharie	\$3,265,097
Franklin	\$655,833	Schuyler	\$267,350
Fulton	\$1,276,682	Seneca	\$177,562
Genesee	\$1,106,334	St. Lawrence	\$786,959
Greene	\$684,632	Steuben	\$1,388,579
Hamilton	\$39,415	Suffolk	\$87,954,870
Herkimer	\$913,551	Sullivan	\$2,032,736
Jefferson	\$3,280,456	Tioga	\$1,053,059
Kings	\$78,319,684	Tompkins	\$4,339,336
Lewis	\$237,667	Ulster	\$2,781,181
Livingston	\$640,167	Warren	\$7,458,591
Madison	\$1,497,370	Washington	\$1,294,628
Monroe	\$31,208,077	Wayne	\$3,059,237
Montgomery	\$3,211,800	Westchester	\$63,646,908
Nassau	\$341,880,267	Wyoming	\$994,220
New York	\$445,043,566	Yates	\$247,152
Total all counties		\$1,427,110,348	

Source: Goss & Associates from IMPLAN Multiplier System

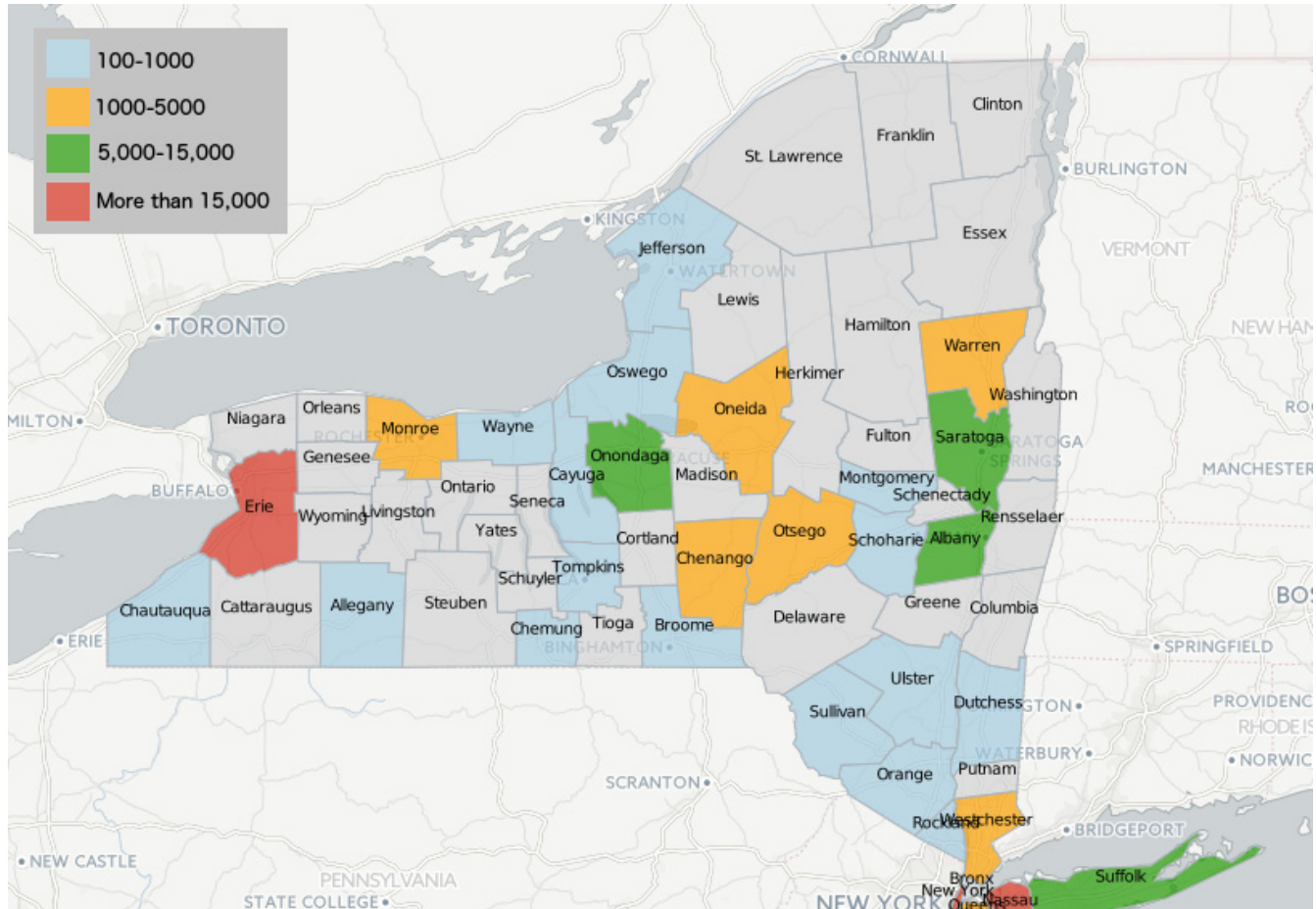
Table 3.8: Jobs impact of P&C industry by county, 2014

Albany	6,771	Niagara	281
Allegany	286	Oneida	3,183
Bronx	759	Onondaga	7,090
Broome	873	Ontario	184
Cattaraugus	112	Orange	493
Cayuga	313	Orleans	55
Chautauqua	237	Oswego	330
Chemung	790	Otsego	2,419
Chenango	1,168	Putnam	103
Clinton	119	Queens	3,475
Columbia	86	Rensselaer	166
Cortland	78	Richmond	483
Delaware	81	Rockland	1,066
Dutchess	1,196	Saratoga	6,687
Erie	19,195	Schenectady	230
Essex	34	Schoharie	379
Franklin	71	Schuyler	17
Fulton	124	Seneca	11
Genesee	91	St. Lawrence	68
Greene	76	Steuben	122
Hamilton	3	Suffolk	10,590
Herkimer	75	Sullivan	368
Jefferson	328	Tioga	71
Kings	4,597	Tompkins	624
Lewis	15	Ulster	411
Livingston	41	Warren	1,422
Madison	96	Washington	65
Monroe	3,582	Wayne	298
Montgomery	272	Westchester	4,303
Nassau	30,213	Wyoming	64
New York	34,931	Yates	16
Total all counties		151,685	

Source: Goss & Associates from IMPLAN Multiplier System

U.S. Census data for 2014 show that Nassau County ranked second only to New York County in terms of the number of employees and firms in the P&C sector. Erie County had the third highest number of employees and firms. Figure 3.1 maps this data.

Figure 3.1: Jobs Impact from the P&C industry by county, 2014



Source: Goss & Associates

Impacts by senate and assembly districts. Tables 3.9 and 3.10 list 2014 impacts by New York senate district. In ascending order, the seven senate districts experiencing the highest total or output impacts were Districts 25, 28, 31, 26, 28, 29, and 30. Tables 3.11 and 3.12 list 2014 impacts by New York assembly districts, with the highest total or output impacts experienced by assembly districts 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, and 76.⁷³

Figure 3.2 shows New York’s senate districts and the job impacts from the P&C industry for 2014. Figure 3.3 illustrates the 2014 job impacts for the P&C industry by New York assembly district.

⁷³Implan does not produce estimates for political subdivisions. County impacts are allocated to Senate and Assembly Districts based on population. Thus, districts within a county that have almost the same population will have the same economic impacts. Both Senate and Assembly District boundaries are those existing in 2011.

Table 3.9: Impacts by senate districts (output and wages & salaries), 2014 (in 2015 dollars)

District	Output	Wages & Salaries	District	Output	Wages & Salaries
1	\$374,652,191	\$95,764,604	33	\$28,035,737	\$9,128,823
2	\$374,652,191	\$95,764,604	34	\$197,817,437	\$63,059,267
3	\$374,652,191	\$95,764,604	35	\$169,781,699	\$53,930,444
4	\$374,652,191	\$95,764,604	36	\$197,817,437	\$63,059,267
5	\$1,788,927,381	\$499,480,234	37	\$169,781,699	\$53,930,444
6	\$1,414,275,190	\$403,715,631	38	\$290,251,286	\$83,772,252
7	\$1,414,275,190	\$403,715,631	39	\$189,329,866	\$49,556,558
8	\$1,788,927,381	\$499,480,234	40	\$307,207,273	\$91,157,606
9	\$1,414,275,190	\$403,715,631	41	\$137,425,574	\$37,227,163
10	\$105,027,885	\$27,720,279	42	\$144,970,909	\$32,018,021
11	\$105,027,885	\$27,720,279	43	\$802,995,116	\$180,506,666
12	\$105,027,885	\$27,720,279	44	\$867,762,295	\$256,434,996
13	\$105,027,885	\$27,720,279	45	\$372,418,511	\$85,059,164
14	\$105,027,885	\$27,720,279	46	\$967,162,660	\$279,813,360
15	\$105,027,885	\$27,720,279	47	\$390,505,134	\$82,926,881
16	\$105,027,885	\$27,720,279	48	\$137,168,371	\$28,362,744
17	\$107,923,816	\$23,933,515	49	\$817,520,886	\$184,482,839
18	\$107,923,816	\$23,933,515	50	\$841,029,717	\$248,429,078
19	\$107,923,816	\$23,933,515	51	\$927,160,588	\$215,405,520
20	\$107,923,816	\$23,933,515	52	\$346,370,749	\$73,165,595
21	\$107,923,816	\$23,933,515	53	\$1,241,397,670	\$334,215,781
22	\$107,923,816	\$23,933,515	54	\$250,322,522	\$63,353,044
23	\$155,379,340	\$36,826,077	55	\$145,762,692	\$41,971,352
24	\$47,455,524	\$12,892,562	56	\$128,788,393	\$37,036,930
25	\$107,923,816	\$23,933,515	57	\$129,386,890	\$29,835,422
26	\$2,040,387,943	\$904,348,871	58	\$242,478,481	\$56,981,496
27	\$1,932,464,127	\$880,415,356	59	\$1,215,490,357	\$346,814,844
28	\$1,932,464,127	\$880,415,356	60	\$1,070,202,260	\$305,642,457
29	\$1,960,499,864	\$889,544,179	61	\$1,270,559,076	\$363,479,902
30	\$1,932,464,127	\$880,415,356	62	\$140,540,263	\$39,914,770
31	\$1,932,464,127	\$880,415,356	63	\$1,070,202,260	\$305,642,457
32	\$28,035,737	\$9,128,823	Total	\$37,979,209,728	\$12,425,459,410

Source: Goss & Associates from IMPLAN Multiplier System

Table 3.10: Impacts by senate districts (self-employment income & jobs), 2014 (in 2015 dollars)

District	Self-employment	Jobs	District	Self-employment	Jobs
1	\$14,659,145	1,765	33	\$2,379,825	152
2	\$14,659,145	1,765	34	\$12,987,643	869
3	\$14,659,145	1,765	35	\$10,607,818	717
4	\$14,659,145	1,765	36	\$12,987,643	869
5	\$83,035,198	7,808	37	\$10,607,818	717
6	\$68,376,053	6,043	38	\$24,080,469	1,250
7	\$68,376,053	6,043	39	\$17,185,464	882
8	\$83,035,198	7,808	40	\$17,698,780	1,367
9	\$68,376,053	6,043	41	\$7,090,962	650
10	\$4,543,920	496	42	\$6,277,362	744
11	\$4,543,920	496	43	\$25,800,459	3,545
12	\$4,543,920	496	44	\$22,790,242	3,468
13	\$4,543,920	496	45	\$10,853,897	1,679
14	\$4,543,920	496	46	\$27,872,789	3,950
15	\$4,543,920	496	47	\$7,471,949	1,641
16	\$4,543,920	496	48	\$6,611,016	692
17	\$8,702,187	511	49	\$26,078,515	3,623
18	\$8,702,187	511	50	\$12,821,188	3,649
19	\$8,702,187	511	51	\$15,926,373	3,938
20	\$8,702,187	511	52	\$10,355,172	1,554
21	\$8,702,187	511	53	\$21,159,360	5,337
22	\$8,702,187	511	54	\$11,152,524	1,207
23	\$11,888,501	752	55	\$6,469,279	689
24	\$3,186,314	242	56	\$5,201,346	597
25	\$8,702,187	511	57	\$9,419,136	655
26	\$82,876,115	6,333	58	\$8,515,144	1,152
27	\$74,173,928	5,822	59	\$21,224,876	5,480
28	\$74,173,928	5,822	60	\$14,709,227	4,799
29	\$76,553,753	5,974	61	\$24,126,571	5,768
30	\$74,173,928	5,822	62	\$5,800,171	652
31	\$74,173,928	5,822	63	\$14,709,227	4,799
32	\$2,379,825	152	Total	\$1,427,110,348	151,685

Source: Goss & Associates from IMPLAN Multiplier System

Table 3.11: Output, wages & salaries impact by assembly district, 2014 (in 2015 dollars)

District	Output	Wages & Salaries	District	Output	Wages & Salaries	District	Output	Wages & Salaries
1	\$195,470,708	\$49,964,141	51	\$48,084,869	\$10,663,447	101	\$483,146,796	\$111,100,388
2	\$195,470,708	\$49,964,141	52	\$48,084,869	\$10,663,447	102	\$232,941,913	\$66,490,719
3	\$195,470,708	\$49,964,141	53	\$48,084,869	\$10,663,447	103	\$64,597,300	\$18,395,994
4	\$195,470,708	\$49,964,141	54	\$48,084,869	\$10,663,447	104	\$79,004,129	\$21,950,402
5	\$195,470,708	\$49,964,141	55	\$48,084,869	\$10,663,447	105	\$139,403,078	\$37,796,857
6	\$195,470,708	\$49,964,141	56	\$48,084,869	\$10,663,447	106	\$66,183,951	\$17,495,249
7	\$195,470,708	\$49,964,141	57	\$48,084,869	\$10,663,447	107	\$26,456,831	\$7,651,559
8	\$195,470,708	\$49,964,141	58	\$48,084,869	\$10,663,447	108	\$439,012,969	\$122,705,975
9	\$434,467,542	\$121,104,840	59	\$48,084,869	\$10,663,447	109	\$655,092,677	\$193,366,081
10	\$195,470,708	\$49,964,141	60	\$48,084,869	\$10,663,447	110	\$546,273,498	\$161,874,034
11	\$195,470,708	\$49,964,141	61	\$24,976,592	\$6,785,559	111	\$133,670,343	\$33,855,583
12	\$195,470,708	\$49,964,141	62	\$24,976,592	\$6,785,559	112	\$898,078,288	\$201,371,546
13	\$673,464,376	\$192,245,538	63	\$24,976,592	\$6,785,559	113	\$502,142,360	\$111,840,299
14	\$673,464,376	\$192,245,538	64	\$29,598,247	\$7,561,137	114	\$380,489,534	\$85,363,437
15	\$673,464,376	\$192,245,538	65	\$966,232,063	\$440,207,678	115	\$37,944,858	\$10,000,552
16	\$673,464,376	\$192,245,538	66	\$966,232,063	\$440,207,678	116	\$63,575,245	\$13,857,235
17	\$673,464,376	\$192,245,538	67	\$966,232,063	\$440,207,678	117	\$4,198,324	\$1,229,648
18	\$673,464,376	\$192,245,538	68	\$966,232,063	\$440,207,678	118	\$91,623,827	\$19,676,963
19	\$673,464,376	\$192,245,538	69	\$966,232,063	\$440,207,678	119	\$530,825,878	\$112,310,448
20	\$673,464,376	\$192,245,538	70	\$966,232,063	\$440,207,678	120	\$116,339,853	\$27,942,384
21	\$673,464,376	\$192,245,538	71	\$966,232,063	\$440,207,678	121	\$136,383,782	\$29,949,127
22	\$673,464,376	\$192,245,538	72	\$966,232,063	\$440,207,678	122	\$401,727,488	\$87,324,540
23	\$40,844,178	\$10,780,109	73	\$966,232,063	\$440,207,678	123	\$131,010,909	\$28,534,088
24	\$40,844,178	\$10,780,109	74	\$966,232,063	\$440,207,678	124	\$162,229,081	\$35,856,046
25	\$40,844,178	\$10,780,109	75	\$966,232,063	\$440,207,678	125	\$140,408,597	\$35,839,386
26	\$40,844,178	\$10,780,109	76	\$966,232,063	\$440,207,678	126	\$290,747,629	\$69,650,071
27	\$40,844,178	\$10,780,109	77	\$12,743,517	\$4,149,465	127	\$490,351,160	\$146,413,302
28	\$40,844,178	\$10,780,109	78	\$12,743,517	\$4,149,465	128	\$490,351,160	\$146,413,302
29	\$40,844,178	\$10,780,109	79	\$12,743,517	\$4,149,465	129	\$490,351,160	\$146,413,302
30	\$40,844,178	\$10,780,109	80	\$12,743,517	\$4,149,465	130	\$91,033,239	\$15,056,998
31	\$40,844,178	\$10,780,109	81	\$12,743,517	\$4,149,465	131	\$35,328,651	\$10,332,876
32	\$40,844,178	\$10,780,109	82	\$12,743,517	\$4,149,465	132	\$57,046,014	\$14,547,691
33	\$40,844,178	\$10,780,109	83	\$12,743,517	\$4,149,465	133	\$25,377,683	\$7,689,032
34	\$40,844,178	\$10,780,109	84	\$12,743,517	\$4,149,465	134	\$145,798,180	\$41,928,600
35	\$40,844,178	\$10,780,109	85	\$12,743,517	\$4,149,465	135	\$145,798,180	\$41,928,600
36	\$40,844,178	\$10,780,109	86	\$12,743,517	\$4,149,465	136	\$145,798,180	\$41,928,600
37	\$40,844,178	\$10,780,109	87	\$12,743,517	\$4,149,465	137	\$145,798,180	\$41,928,600
38	\$40,844,178	\$10,780,109	88	\$147,636,260	\$46,896,038	138	\$145,798,180	\$41,928,600
39	\$40,844,178	\$10,780,109	89	\$147,636,260	\$46,896,038	139	\$58,153,603	\$15,657,396
40	\$40,844,178	\$10,780,109	90	\$147,636,260	\$46,896,038	140	\$423,719,899	\$121,166,545
41	\$48,084,869	\$10,663,447	91	\$147,636,260	\$46,896,038	141	\$690,453,071	\$197,188,682
42	\$48,084,869	\$10,663,447	92	\$147,636,260	\$46,896,038	142	\$690,453,071	\$197,188,682
43	\$48,084,869	\$10,663,447	93	\$147,636,260	\$46,896,038	143	\$690,453,071	\$197,188,682
44	\$48,084,869	\$10,663,447	94	\$69,823,694	\$21,641,730	144	\$223,670,021	\$64,149,942
45	\$48,084,869	\$10,663,447	95	\$82,792,455	\$25,850,781	145	\$156,986,728	\$45,144,407
46	\$48,084,869	\$10,663,447	96	\$109,517,806	\$27,128,916	146	\$423,719,899	\$121,166,545
47	\$48,084,869	\$10,663,447	97	\$109,517,806	\$27,128,916	147	\$357,994,600	\$101,475,061
48	\$48,084,869	\$10,663,447	98	\$48,762,764	\$13,501,226	148	\$84,826,153	\$18,976,107
49	\$48,084,869	\$10,663,447	99	\$48,762,764	\$13,501,226	149	\$690,453,071	\$197,188,682
50	\$48,084,869	\$10,663,447	100	\$71,155,770	\$11,779,529	150	\$44,163,682	\$10,591,278
						Total	\$37,979,209,728	\$12,425,459,410

Source: Goss & Associates from IMPLAN Multiplier System

Table 3.12: Self-employment income and jobs by assembly district, 2014 (in 2015 dollars)

District	Self-Employment Income	Jobs	District	Self-Employment Income	Jobs	District	Self-Employment Income	Jobs
1	7,648,250	921	51	3,877,212	228	101	6,187,177	2,000
2	7,648,250	921	52	3,877,212	228	102	7,718,516	1,007
3	7,648,250	921	53	3,877,212	228	103	2,384,156	314
4	7,648,250	921	54	3,877,212	228	104	3,832,140	381
5	7,648,250	921	55	3,877,212	228	105	7,042,475	654
6	7,648,250	921	56	3,877,212	228	106	3,662,246	316
7	7,648,250	921	57	3,877,212	228	107	1,910,774	136
8	7,648,250	921	58	3,877,212	228	108	12,149,337	1,800
9	20,104,137	1,899	59	3,877,212	228	109	16,695,571	2,604
10	7,648,250	921	60	3,877,212	228	110	14,933,277	2,198
11	7,648,250	921	61	1,677,007	127	111	5,669,767	589
12	7,648,250	921	62	1,677,007	127	112	27,183,174	3,940
13	32,560,025	2,877	63	1,677,007	127	113	15,588,492	2,204
14	32,560,025	2,877	64	2,117,048	147	114	9,643,189	1,681
15	32,560,025	2,877	65	37,086,964	2,911	115	2,302,157	198
16	32,560,025	2,877	66	37,086,964	2,911	116	3,170,912	311
17	32,560,025	2,877	67	37,086,964	2,911	117	325,106	23
18	32,560,025	2,877	68	37,086,964	2,911	118	2,908,827	417
19	32,560,025	2,877	69	37,086,964	2,911	119	9,654,591	2,219
20	32,560,025	2,877	70	37,086,964	2,911	120	3,864,638	559
21	32,560,025	2,877	71	37,086,964	2,911	121	3,602,232	586
22	32,560,025	2,877	72	37,086,964	2,911	122	6,407,220	1,670
23	1,767,080	193	73	37,086,964	2,911	123	4,701,915	623
24	1,767,080	193	74	37,086,964	2,911	124	5,655,745	765
25	1,767,080	193	75	37,086,964	2,911	125	4,846,454	666
26	1,767,080	193	76	37,086,964	2,911	126	5,806,424	1,269
27	1,767,080	193	77	1,081,739	69	127	7,071,566	2,116
28	1,767,080	193	78	1,081,739	69	128	7,071,566	2,116
29	1,767,080	193	79	1,081,739	69	129	7,071,566	2,116
30	1,767,080	193	80	1,081,739	69	130	4,687,332	474
31	1,767,080	193	81	1,081,739	69	131	2,654,241	192
32	1,767,080	193	82	1,081,739	69	132	2,598,655	282
33	1,767,080	193	83	1,081,739	69	133	1,427,367	126
34	1,767,080	193	84	1,081,739	69	134	5,888,316	676
35	1,767,080	193	85	1,081,739	69	135	5,888,316	676
36	1,767,080	193	86	1,081,739	69	136	5,888,316	676
37	1,767,080	193	87	1,081,739	69	137	5,888,316	676
38	1,767,080	193	88	9,224,190	624	138	5,888,316	676
39	1,767,080	193	89	9,224,190	624	139	2,882,822	281
40	1,767,080	193	90	9,224,190	624	140	6,234,705	1,906
41	3,877,212	228	91	9,224,190	624	141	9,489,824	3,096
42	3,877,212	228	92	9,224,190	624	142	9,489,824	3,096
43	3,877,212	228	93	9,224,190	624	143	9,489,824	3,096
44	3,877,212	228	94	4,395,599	306	144	3,793,367	1,014
45	3,877,212	228	95	5,200,364	359	145	2,979,587	717
46	3,877,212	228	96	12,247,865	485	146	6,234,705	1,906
47	3,877,212	228	97	12,247,865	485	147	5,739,131	1,612
48	3,877,212	228	98	3,607,037	243	148	6,243,846	416
49	3,877,212	228	99	3,607,037	243	149	9,489,824	3,096
50	3,877,212	228	100	2,190,445	370	150	3,053,574	237
						Total	1,427,110,348	151,685

Source: Goss & Associates from IMPLAN Multiplier System

Figure 3.2: P&C industry job impacts by New York senate district 2014

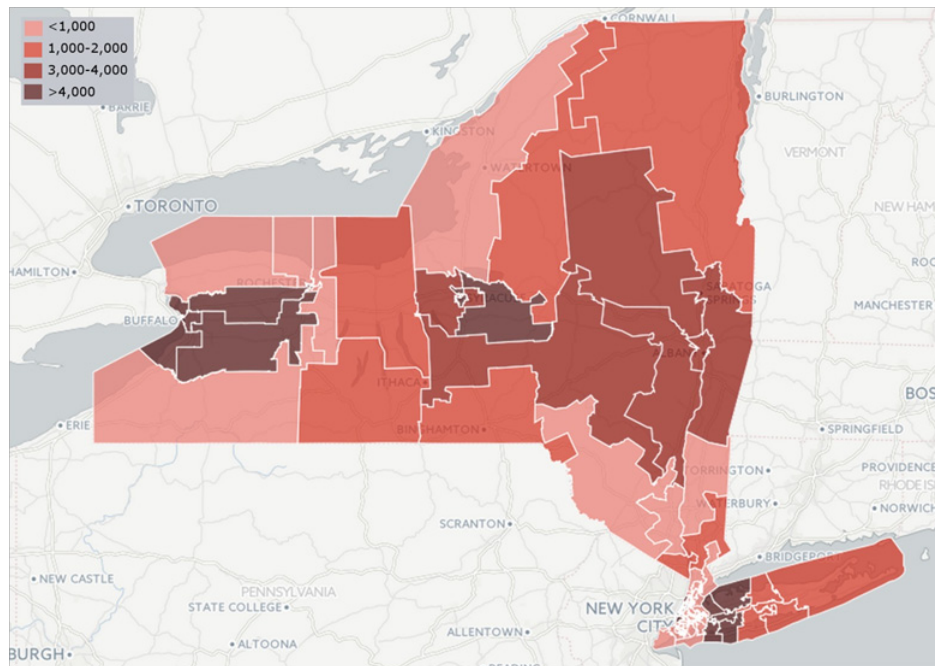
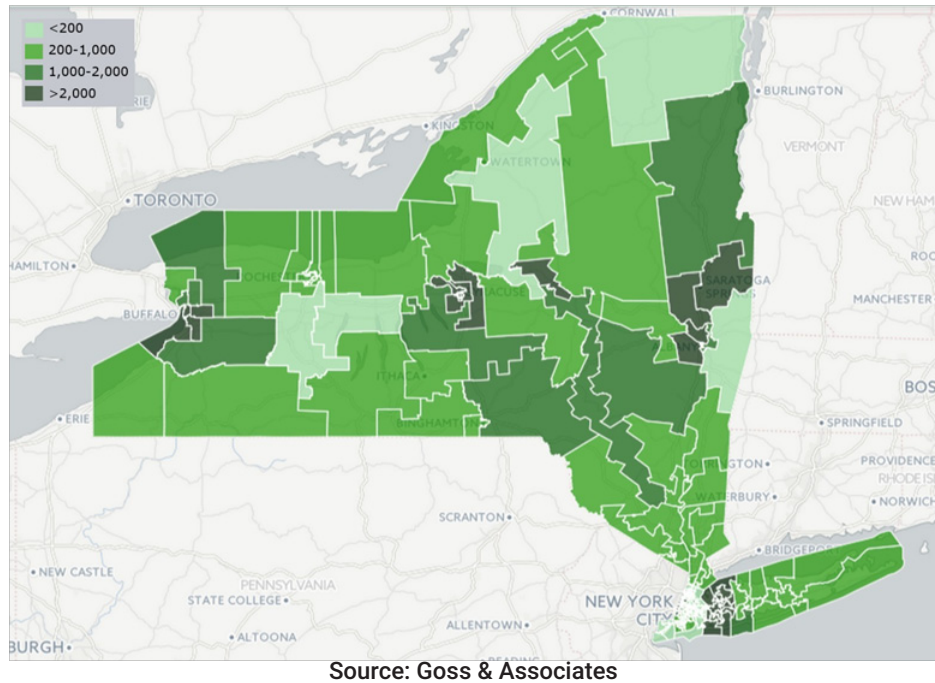


Figure 3.3: P&C industry job impacts by New York assembly district, 2014



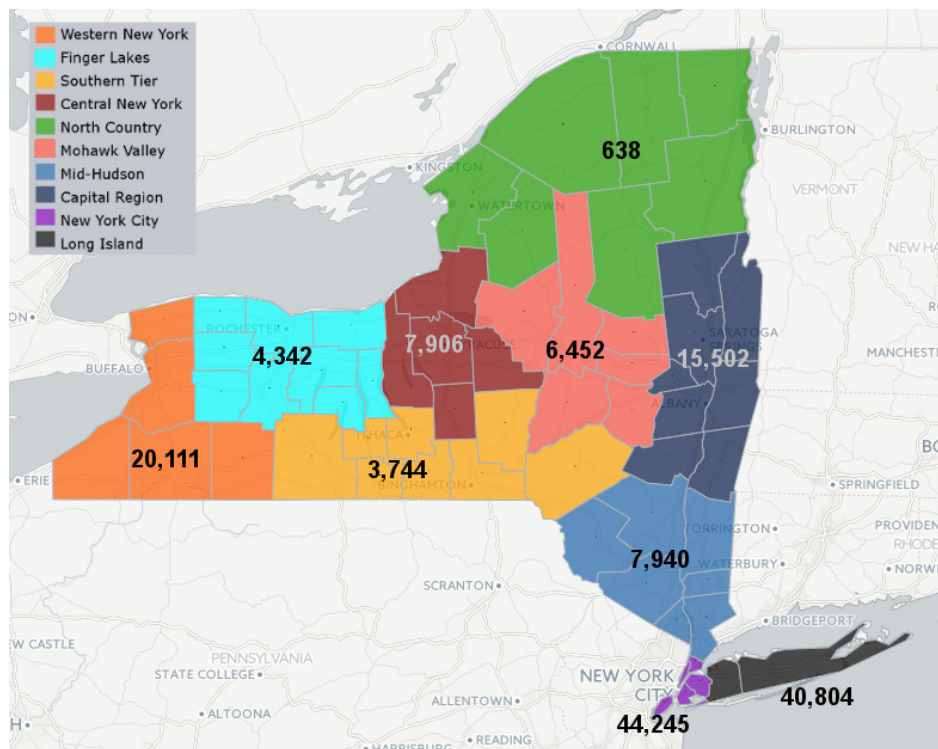
Impacts by New York economic development region. Total or output, wages & salaries, self-employment income, and jobs impacts for each of New York’s economic development regions is broken down in Table 3.13. Figure 3.4 maps these economic development regions and lists the jobs impacts for each.

Table 3.13: Economic development region impacts, 2014 (in 2015 dollars)

Region	Output	Wages & Salaries	Self-Employment Income	Jobs
Western New York	\$4,460,790,615	\$1,267,557,193	\$71,045,623	20,111
Finger Lakes	\$918,631,445	\$255,871,668	\$40,567,439	4,342
Southern Tier	\$829,399,076	\$182,451,687	\$24,767,301	3,744
Central New York	\$1,795,316,403	\$521,292,587	\$31,982,858	7,906
North Country	\$126,537,618	\$30,401,832	\$7,092,488	638
Mohawk Valley	\$1,532,490,513	\$340,400,098	\$27,786,032	6,452
Mid-Hudson	\$1,784,808,054	\$520,417,808	\$115,623,085	7,940
Capital Region	\$3,675,562,870	\$950,535,800	\$104,967,944	15,502
New York City	\$13,536,384,039	\$5,763,364,962	\$573,442,442	44,245
Long Island	\$9,319,289,094	\$2,593,165,776	\$429,835,137	40,804
Total	\$37,979,209,728	\$12,425,459,410	\$1,427,110,348	151,685
Total	\$37,979,209,728	\$12,425,459,410	\$1,427,110,348	151,685

Source: Goss & Associates from IMPLAN Multiplier System

Figure 3.4: New York’s economic development regions and the jobs impact from the P&C industry, 2014

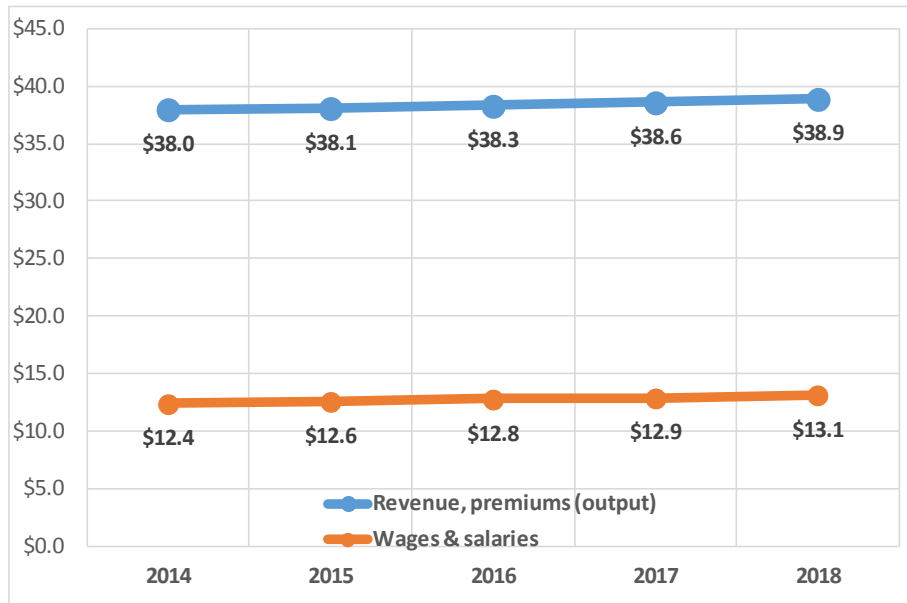


Source: Goss & Associates

Total Impact on New York Economic Activity

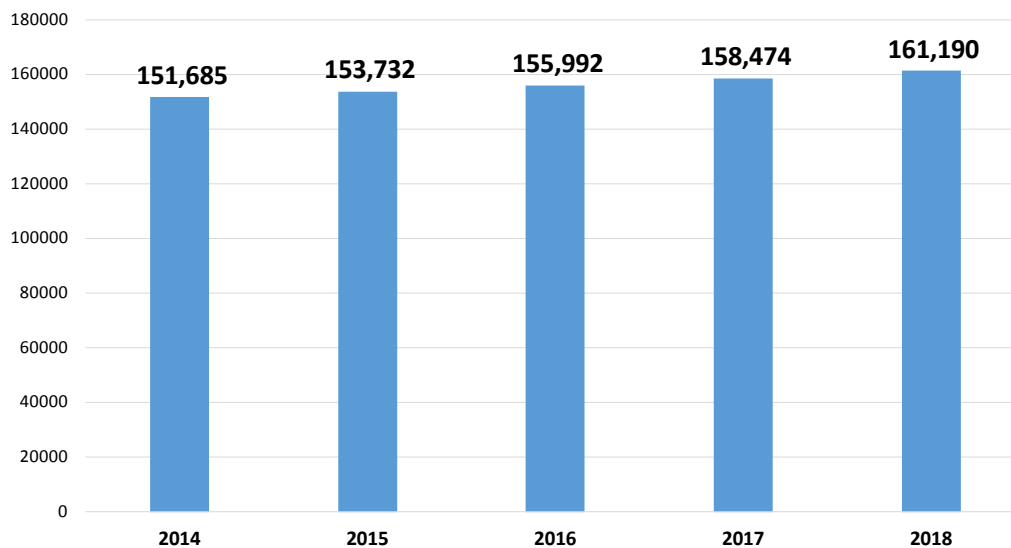
Figures 3.5 and 3.6 depict yearly impacts from 2014 through 2018 of New York P&C firms on sales, wages and salaries, self-employment income, state and local taxes, and jobs on the state of New York. As shown, impacts in each case increase slightly each year.

Figure 3.5: Revenue, premiums, and wages & salaries impacts of the P&C industry on New York (in billions of 2015 dollars), 2014-2018



Source: Goss & Associates based on IMPLAN model

Figure 3.6: Job impacts of the P&C industry on New York, 2014-2018



Source: Goss & Associates based on IMPLAN model

Summary

This chapter has detailed the impacts of New York's P&C industry, both captive and independent. As presented, the impacts are quite significant. Future impacts, as estimated, will differ depending on competition from other states in terms of financial incentives and legislation that impacts the profitability of P&C insurance firms.

However, data indicate that Superstorm Sandy depressed some of the impacts below those experienced in Goss & Associates' 2012 study.



Appendix A: Measuring the Impact of P&C Insurance

An Overview

P&C insurance is an engine of economic growth for the state of New York. Furthermore, P&C vendors contribute to the economy through their own employment and payroll, and through purchases from vendors. Payments to these vendors are an important source of growth for the state economy. Thus, P&C firms produce benefits for the New York taxpayer, both directly and indirectly.

Direct benefits for the New York taxpayer include the receipt of sales taxes on purchases by P&C firms.

As a result of the widespread distribution of insurance operations, the industry's existence in New York affects the state's economy in many ways.

As discussed earlier, the presence of P&C companies increases the attractiveness of the community and, in the long run, encourages the startup and/or relocation of retail businesses and manufacturing firms to the state. Access to P&C jobs also increases quality-of-life, helping the state to retain and attract individuals, thereby helping to create "brain gain."

In addition to these growth dynamics, there also is economic activity related to the direct expenditures by insurance vendors, such as payroll, local jobs and income. Furthermore, P&C firms indirectly affect the overall level of state economic activity. For example, the office supplies industry provides jobs and income for workers in the state as a result of insurance spending on computers and office supplies.

Large portions of P&C spending are made in the local economy. That portion spent locally adds to community income. Economic impacts that take place outside the local economy, for example, spending in New Jersey, are called leakages and reduce overall impacts. They are excluded when estimating economic impacts of the local area and the state.

Insurance contributes to New York's economy by encouraging businesses, residents, and visitors to purchase in the state.

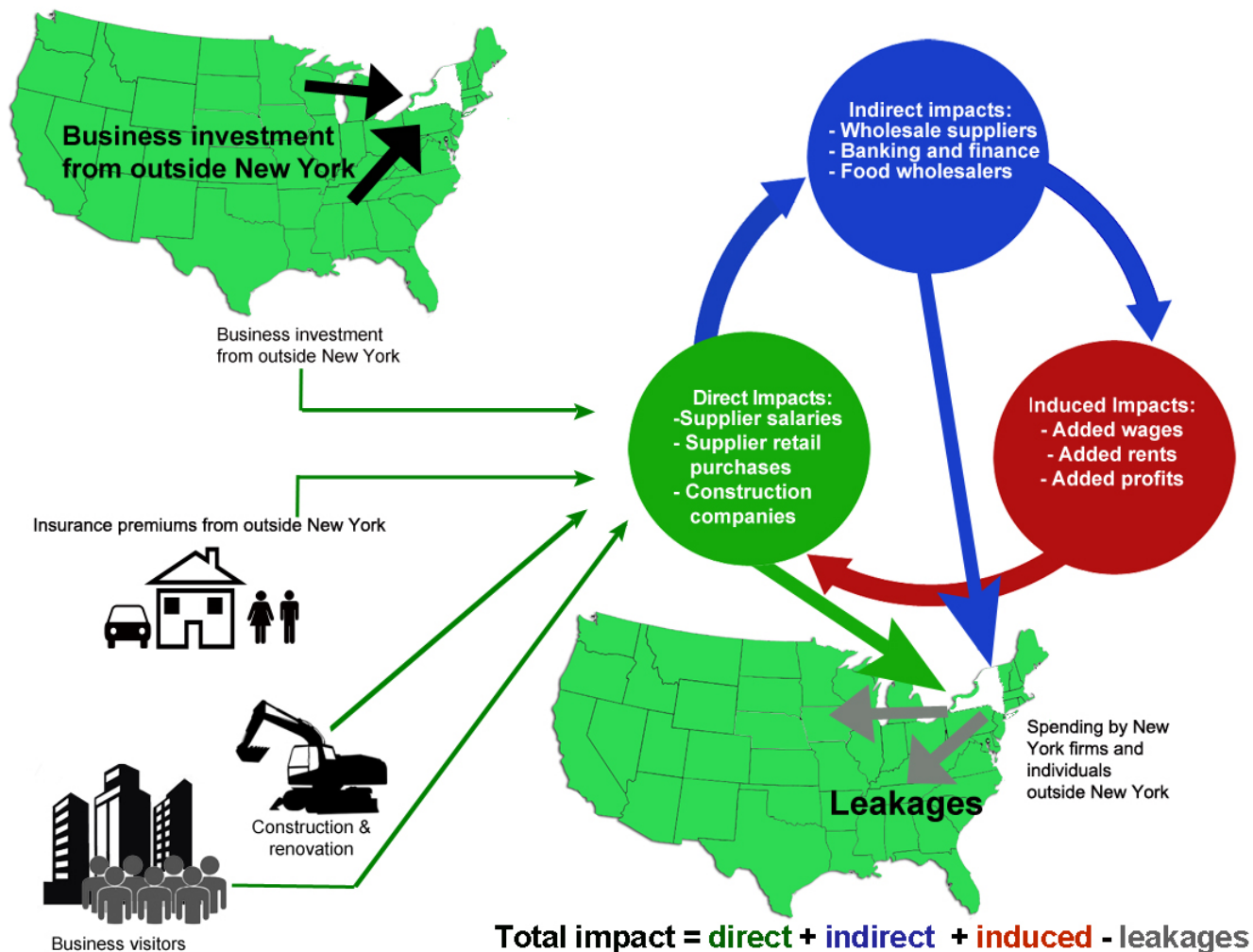
Additionally, P&C firms increase retail sales in the local area and the state as employees and visitors who reside outside New York spend a portion of their wages in the state. In other words, P&C companies contribute to the region's export of retail goods. These sales have a positive impact on the local area by adding jobs and income in the retail and related industries. Table A.1 lists the three components of the total economic impact: the Direct Economic Impact, the Indirect Economic Impact, and the Induced Economic Impact.

Access to P&C jobs also increases quality-of-life, helping the city to retain and attract well-educated individuals, thereby helping to create "brain gain."

Table A.1: The three components of the total economic impacts	
Direct Economic Impacts	Spending by P&C firms flowing into the area has direct economic effects on the local economy via expenditures for goods and services and for employee salaries. The most obvious direct expenditures are payment of wages to workers employed by the P&C sector. Direct economic impacts are color coded green in Figure A.1.
Indirect Economic Impacts	Second-round spending takes place as retailers and wholesalers that furnish P&C firms with supplies purchase from other companies in the area, resulting in indirect economic impacts on the area and state economies by the P&C insurance sector. Furthermore, P&C firms encourage the expansion of other businesses in the state. P&C companies generate indirect effects by increasing: (a) the number of firms drawn to the community, (b) the volume of deposits in local financial institutions and, (c) economic development. Examples of indirect economic impacts are color coded blue on Figure A.1.
Induced Economic Impacts	Induced impacts in the region occur as the initial spending feeds back to industries in the region when workers in the area purchase additional output from local firms in a third round of spending. That is, P&C companies increase overall area income and population, which produces another round of increased spending adding to sales, earnings and jobs. Examples of induced economic impacts are color coded red in Figure A.1.

Source: Goss & Associates

Figure A.1: Schematic of Impacts



Source: Goss & Associates 2015

Appendix B: Choosing a Technique to Measure Impacts

Historically, the high cost to develop I-O models prevented their widespread use in regional impact analysis. However, with the advent of “ready-made” multipliers produced by third parties, such as the U.S. Forestry Service, I-O multipliers became a much more viable option for performing impact analysis. These “ready-made” models are made region specific at a fraction of the costs of their predecessors.

All purely non-survey techniques or “ready-made” multipliers take a national I-O table as a first approximation of regional inter-industry relationships. The national table is then made region-specific by removing those input requirements that are not produced in the region. This study will use the most widely recognized “ready-made” multiplier system, IMPLAN Multipliers.

IMPLAN Multipliers

The Forestry Service of the U.S. Department of Agriculture developed the IMPLAN Multipliers in the 1980s (U.S. Forest Service, 1985). For very populous areas, IMPLAN divides the economy into 300-400 industrial sectors. Industries that do not exist in the region are automatically eliminated during user construction of the model (e.g. cotton farming in New York).

IMPLAN uses an industry-based methodology to derive its input-output coefficients and multipliers. Primary sources for data are County Business Patterns data and Bureau of Economic Analysis data.

IMPLAN and RIMS (Regional Input-Output Modeling System) are two of the most widely used multiplier models. IMPLAN has been compared to other multiplier systems and found to produce reliable estimates.⁷⁴ Likewise, in a study estimating the impacts of opening an automobile assembly plant, researchers concluded that IMPLAN’s outcomes are, on balance, somewhat more accurate than RIMS.⁷⁵

IMPLAN Multipliers possess the following advantages over other I-O multiplier systems:

1. Price changes are accounted for in the creation of the multipliers.
2. Employment increases or decreases are assumed to produce immediate in or out-migration.

IMPLAN and RIMS (Regional Input-Output Modeling System) are two of the most widely used multiplier models.

⁷⁴Richman, D.S. and R.K. Schwer. “A Systematic Comparison of the REMI and IMPLAN Models: The Case of Southern Nevada.” *Review of Regional Studies*, Vol. 23(2), 1993, pp. 143-161

⁷⁵Crihfield, J. B. and H. S. Campbell, Jr. 1991. Evaluating alternative regional planning models. *Growth and Change* 22(2):1-16.

Appendix C: Researchers' Biographies

Ernie Goss is the Jack MacAllister Chair in Regional Economics at Creighton University and is the initial director for Creighton's Institute for Economic Inquiry. He is also principal of the Goss Institute in Denver, Colorado. Goss received his Ph.D. in Economics from The University of Tennessee in 1983 and is a former faculty research fellow at NASA's Marshall Space Flight Center. He was a visiting scholar with the Congressional Budget Office for 2003-04, and has testified before the U.S. Congress, the Kansas Legislature, and the Nebraska Legislature. In the fall of 2005, the Nebraska Attorney General appointed Goss to head a task force examining gasoline pricing in the state.

He has published more than 100 research studies focusing primarily on economic forecasting and on the statistical analysis of business and economic data. His book Changing Attitudes Toward Economic Reform During the Yeltsin Era was published by Praeger Press in 2003, and his book Governing Fortune: Casino Gambling in America was published by the University of Michigan Press in March 2007.

He is editor of Economic Trends, an economics newsletter published monthly with more than 9,500 subscribers, produces a monthly business conditions index for the nine-state Mid-American region and conducts a survey of bank CEOs in ten U.S. states. Survey and index results are cited each month in approximately 100 newspapers, and citations have included the New York Times, Wall Street Journal, Investors Business Daily, The Christian Science Monitor, Chicago Sun Times and other national and regional newspapers and magazines. Each month 75-100 radio stations carry his Regional Economic Report.

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Jeffrey Milewski is a senior research economist at Goss & Associates. He received his master's degree in political economy from the London School of Economics and Political Science in 2013. He completed his bachelor's degree at Creighton University in 2007, having studied economics and finance. Milewski also has experience working in finance, and as an entrepreneur. Recently, he has co-authored impact studies on a range of topics such as highway expansion, cost/benefit, and national sporting events.

Appendix D: Goss & Associates Research Consultancies, 2012-15

1. Spring 2015, Contract with Ho-Chunk to estimate the benefits of operations of Ho-Chunk on the Winnebago Community, and on the states of Iowa, Nebraska and South Dakota.
2. Spring 2015, Contract with College World Series, Inc. to estimate the economic impact of the College World Series on the city of Omaha and the state of Nebraska, 2014-15
3. Spring 2015, Contract with HDR to estimate the impact of merging UNL's College of Architecture and the Hixson-Lied College of Fine and Performing Arts
4. Spring 2015, Contract with the Platte Institute to estimate the costs and benefits of public power in Nebraska
Spring 2015, Contract with 4 Lanes 4 Nebraska to estimate the impact of the expansion of Highway 275 on Nebraska.
5. Summer 2014. Contract and study for Consumer Energy Alliance to examine the update previous study examining the impact of the Keystone Pipeline, Washington, DC.
6. Spring 2014. Contract and study for Fort Dodge Growth Alliance to examine the impact of various economic development options for the eight county economic area, Fort Dodge, Iowa.
7. Spring 2014. Contract and study for ALEGENT Health to examine the impact of ALEGENT's clinical and hospital operations on Iowa and Nebraska (with University of Nebraska-Lincoln).
8. Winter 2014. Contract and study for 4R Gun Club to determine the economic feasibility of a full-service shooting range in Omaha, NE.
9. Winter 2014. Contract and study for Creighton University School of Dentistry to determine the economic contribution of an expanded dental school on the State of Nebraska and City of Omaha.
10. Fall 2013. Contract and study for Greater Omaha Chamber of Commerce to investigate Nebraska's tax competitiveness.
11. Fall 2013. Contract and study for Metropolitan Entertainment & Convention Authority to estimate the impact of the CenturyLink Center on Omaha, NE.
12. Summer 2013. Contract and study for Greenbrier Rail Service to perform a competitive demand and supply analysis for welders and construction laborers for 2013, Portland, Oregon.
13. Summer 2013. Contract and study for the Platte Institute for Economic Research to determine the impact of taxes and spending on economic development.
14. Winter 2013. Contract and study for Douglas County Health Center to estimate the impact of the organization on Douglas County and the State of Nebraska.
15. Fall 2012. Contract with Metropolitan Community College to estimate the impact of the institution on the State of Nebraska and its service area.
16. Summer 2012. Contract with the American Society of Engineering-Nebraska to examine the impact on costs of outsourcing.
17. Summer 2012. Contract with Consumer Energy Alliance to examine the impacts of the Keystone Pipeline, Houston, Texas.
18. Spring 2012. Contract with Lancaster County Agricultural Society to estimate the economic feasibility of Phase 3 of the Lancaster Event Center, Lincoln, NE.
19. Winter 2012. Contract with New York First to estimate the impact of New York property and casualty industry on the state of New York.
20. Winter 2012. Contract with East Campus Realty to estimate the impact of Midtown Crossing on the City of Omaha.